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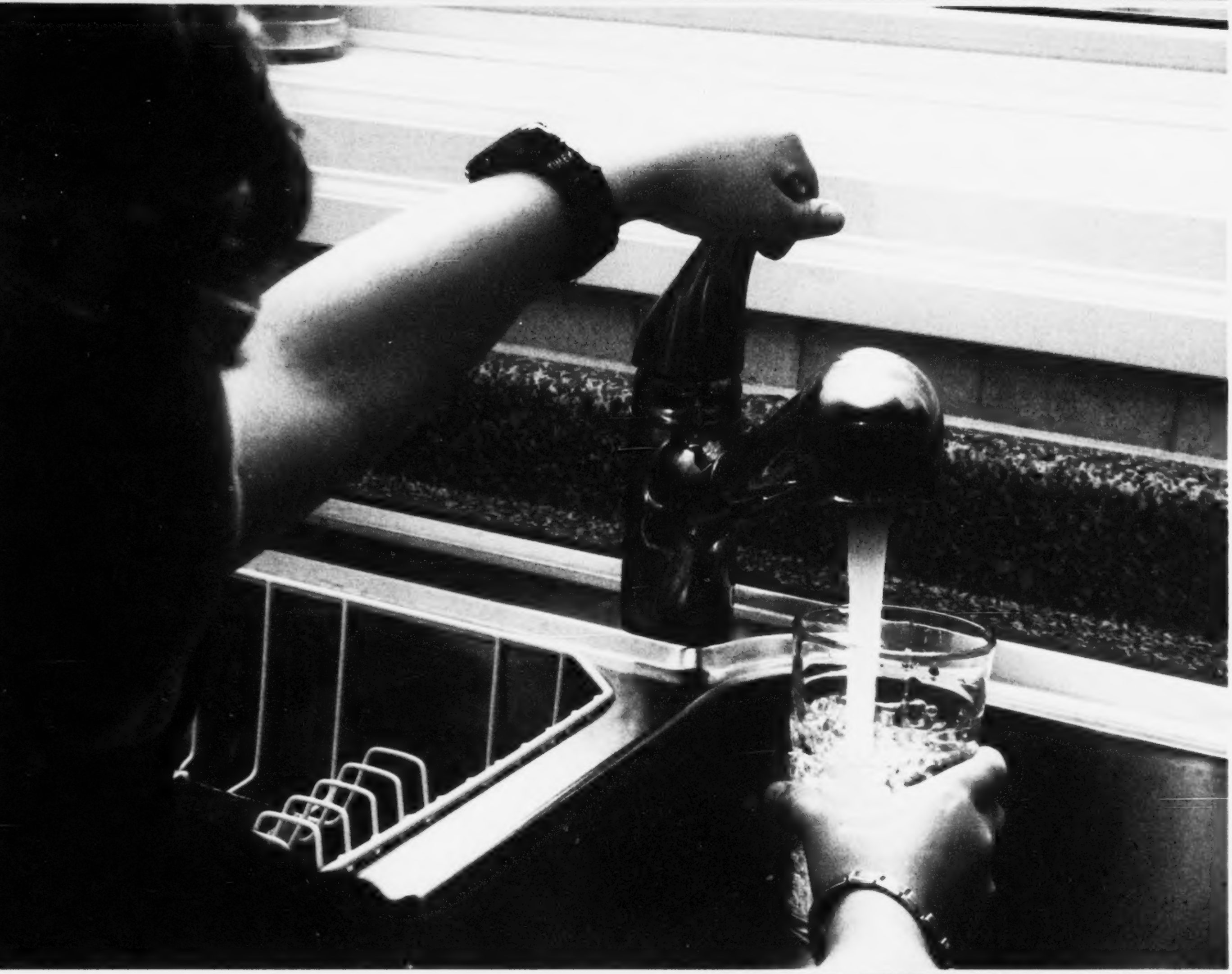
Annual Report 2008-2009

Chief Drinking Water Inspector



Protecting our environment. Ontario

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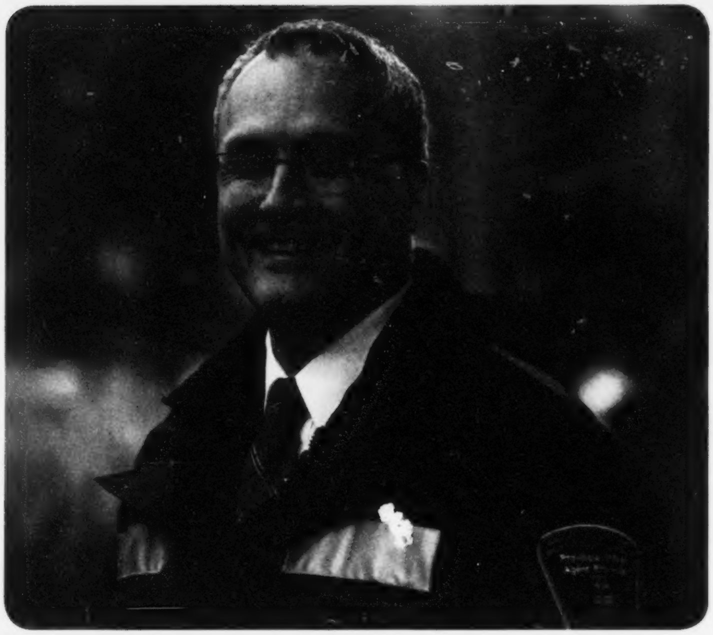
Message from the
Chief Drinking Water Inspector



Given that 2010 is the tenth anniversary of the tragic events of Walkerton, it is timely to reflect on the significant transformation that has taken place in Ontario to ensure that the proper drinking water safeguards are in place.

We learned a number of valuable lessons as a result of the Walkerton tragedy. In fact the measures that the province has subsequently undertaken have now positioned Ontario as a world leader in drinking water protection.

As an example, this year's test and inspection results continue to demonstrate that Ontario's drinking water is of high quality and well protected. Over 600,000 individual test results were taken over the past year at drinking water systems. 99.87 per cent of results from municipal residential drinking water systems met Ontario's rigorous health-based standards.

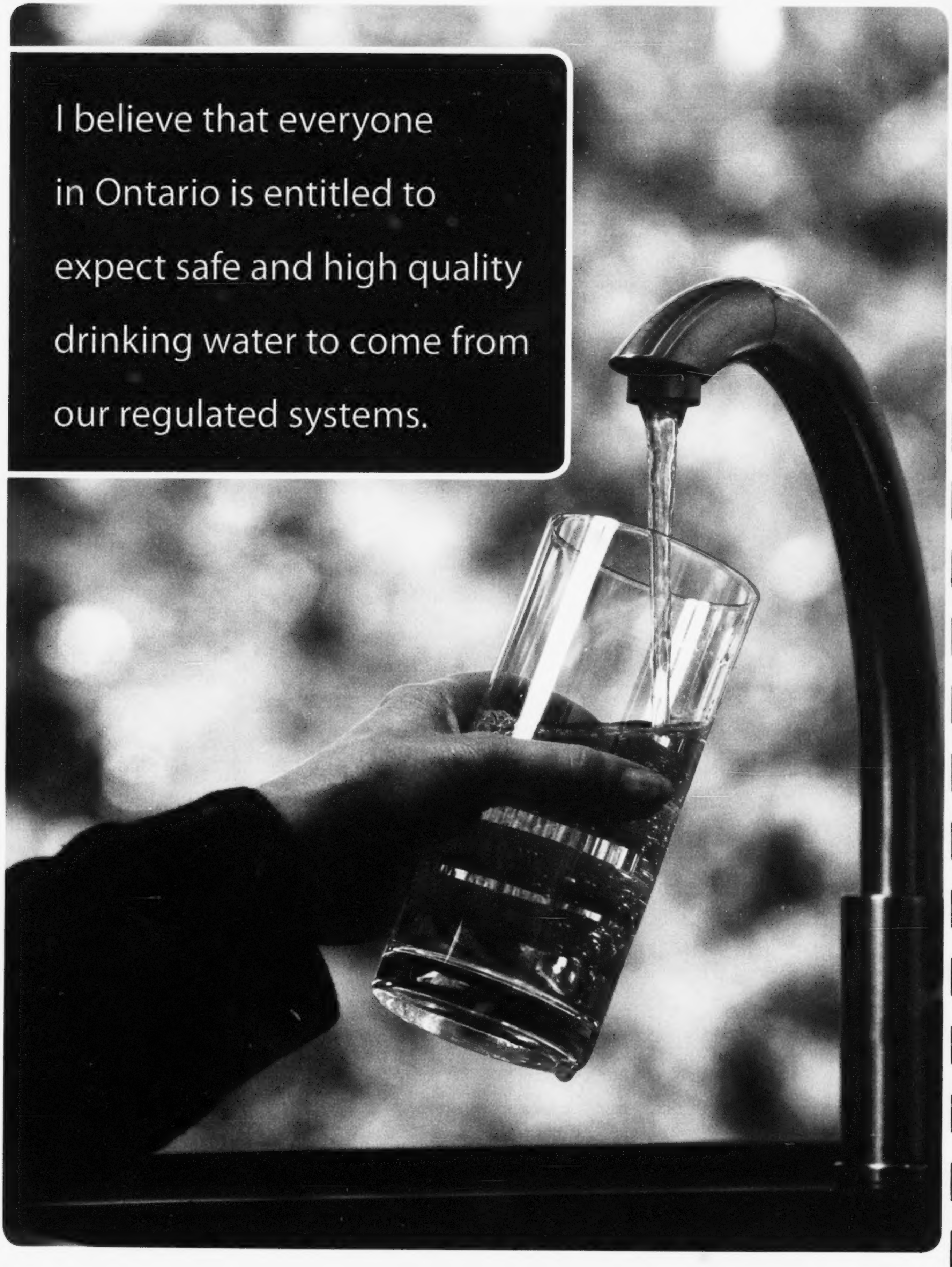
Ontario is also leading on a number of other drinking water-related fronts including protection of drinking water sources, mandatory municipal licensing for drinking water systems and dedicated annual inspections by ministry staff of all municipal drinking water systems and licensed laboratories. This year has also seen the official opening of the new Walkerton Clean Water Centre, a world-class facility dedicated to hands-on operator training and demonstrations of innovative treatment technologies. To date, over 23,000 course participants have been trained through the centre.

We are proud of the levels of protection we have achieved in Ontario, which is due in no small part to our dedicated partners, many of whom are highlighted in this year's report. I am also pleased that Dr. Arlene King, Ontario's Chief Medical Officer of Health and a key partner, has provided a summary in this report on small drinking water systems regulated by the Ministry of Health and Long-Term Care.

I want to take this opportunity to personally thank our many partners who are dedicated to safeguarding drinking water in Ontario. Working together, we have achieved a major transformation of drinking water protection. The events of Walkerton have taught us the importance of ongoing vigilance and I assure you that the Ministry of the Environment and all our partners remain ever vigilant in protecting Ontario's drinking water. You should expect no less from us.

John Stager
Chief Drinking Water Inspector

I believe that everyone in Ontario is entitled to expect safe and high quality drinking water to come from our regulated systems.



Building Confidence in Your Drinking Water

This is the Chief Drinking Water Inspector's fifth annual report. In this section you will find an overview of the ministry's efforts over the past decade to create a comprehensive drinking water protection system and highlights of our progress during 2008-09. Data on the performance of drinking water systems and licensed laboratories from April 1, 2008 to March 31, 2009 can be found in the latter part of this report.

Safety Net Leadership

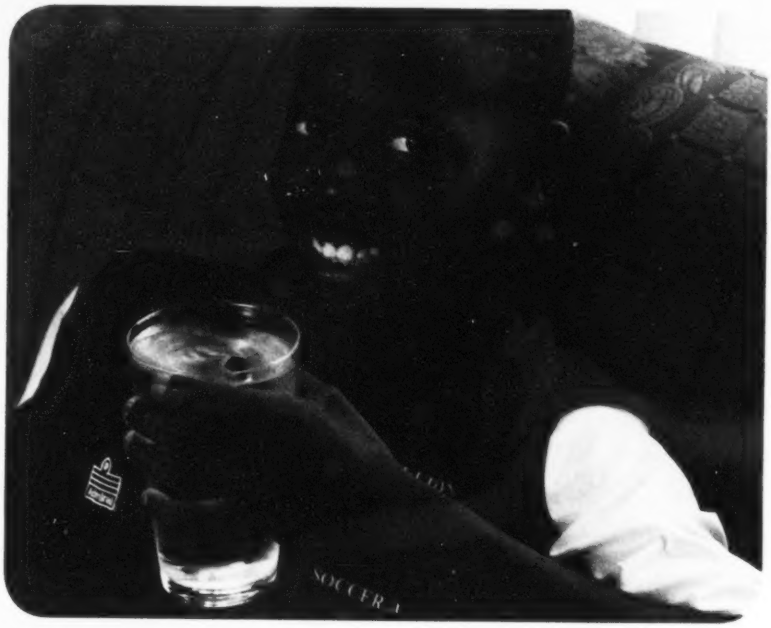
I am proud to say that Ontario's drinking water is among the best protected in the world. These are simple but powerful words. I can say them with confidence, thanks to the system that we have set up to protect your drinking water.

We call it a safety net, an extensive network of safeguards and oversight measures that covers the entire drinking water system in the province, from the source to the moment you turn on your tap.

The safety net is at the heart of the total transformation that our approach to protecting drinking water has undergone since the tragedy of Walkerton 10 years ago. I personally witnessed the terrible consequences of that tragedy first-hand as an Ontario government representative who was sent to the town to help local residents deal with the crisis.

Today we are in a very different world. Justice Dennis O'Connor's inquiry into the tragedy produced a list of 121 recommendations for improving Ontario's approach to protecting drinking water.

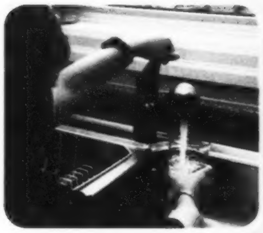
We have implemented every one of those recommendations in an unprecedented drive to completely overhaul the way we safeguard our drinking water.



Our Safety Net

The Walkerton tragedy made it clear that we needed a comprehensive approach to drinking water protection. This was the rationale behind our safety net.

The foundation for it lies in the strong set of laws and regulations that have been put in place over the past decade. These include the Safe Drinking Water Act and the Clean Water Act and their regulations as well as mandatory drinking water quality standards.



CHIEF'S *PERSPECTIVE*

Ontario's drinking water safety net has placed the province at the forefront of drinking water protection through a strong legislative framework, multi-disciplinary actions and a highly effective system of checks and balances.

The role of the safety net begins with the job of protecting drinking water at the source — Ontario's lakes, rivers and groundwater supplies. With this in mind, we are working with local communities and Source Protection Committees in Ontario to develop scientifically-based plans to protect and preserve our drinking water sources.

Creating the safety net has also involved establishing checks and balances to ensure that your drinking water meets our stringent health-based standards for quality and safety as it makes its way through the treatment and distribution systems.

We have laboratories licensed to conduct hundreds of thousands of tests on samples from the drinking water systems each year to ensure that they meet those standards. These laboratories are, in turn, inspected regularly to make sure they too are performing at the highest possible level.

Working to safeguard drinking water also requires constant vigilance, and so our transformation has emphasized the need to identify potential risks and act quickly to minimize them. We were able to do this with our Lead Action Plan, which we introduced in 2007 to take strong action on minimizing the risk of lead in your drinking water.

We also have a toolkit of measures for making sure that the people who are responsible for drinking water systems comply with the law. These include providing them with information on their obligations, carrying out

RECOGNIZING *EXCELLENCE*

Safety Net Journey

The year 2010 marks the end of one of the most challenging, transformative and important decades in the history of drinking water management in Ontario. In May 2000, seven people died and more than 2,300 people fell ill in Walkerton after their drinking water became contaminated with *E. coli*. This tragedy led to the establishment of the drinking water safety net.

Chronology of Major Milestones

January & May 2002	Report of the Walkerton Inquiry led by Ontario Associate Chief Justice Dennis O'Connor was released with 121 recommendations
December 2002	Safe Drinking Water Act received royal assent, laying the foundation for a stronger regulatory framework
July 2003	First Chief Drinking Water Inspector was appointed
January 2004	Ministry of the Environment's Drinking Water Management Division was created
May 2004	Advisory Council on Drinking Water Quality and Testing Standards was established
October 2004	Walkerton Clean Water Centre was founded
May 2005	Ontario's safety net model for drinking water protection from source-to-tap was introduced in the Chief Drinking Water Inspector's Progress Report
April 2006	First Chief Drinking Water Inspector's report was released
October 2006	Clean Water Act received royal assent, adding another major element to the regulatory framework
February 2007	Drinking Water Ontario online gateway launched, providing public access to drinking water information
June 2007	Lead Action Plan to safeguard drinking water was launched and the first Minister's Annual Report on Drinking Water was released
August 2007	Nineteen Source Protection Committee chairs were appointed and committees began work on source protection planning for their areas in December 2007
August 2007	Ontario Small Waterworks Assistance Program was announced
September 2007	Fulfillment of all 121 of Justice O'Connor's recommendations
December 2008	Regulation of small private drinking water systems serving the public were transferred to public health units, given their existing linkages to these types of facilities
January 2009	Municipal Drinking Water Licensing Program was launched
June 2009	First municipal drinking water licence was issued
August 2009	The ministry's Drinking Water Management Division received a prestigious silver award for innovation from the Institute of Public Administration of Canada
January 2010	The Mattagami Region Source Protection Committee became the first in the province to submit a proposed assessment report which identifies existing and potential threats to the quality and quantity of source water in their area
March and June 2010	The Walkerton Clean Water Centre marked five years in operation, during which it had provided training on drinking water systems to 23,000 course participants. Grand opening of the new permanent facility

targeted inspections and, if necessary, taking action to enforce the law.

Of course, all of this requires well-trained and certified drinking water system operators and training and licensing for municipal drinking water system owners across the province, another key element of the safety net.

This was the idea behind the creation of the Walkerton Clean Water Centre in October 2004. By the end of March 2010, this world-class facility had coordinated and delivered training to over 23,000 course participants and in June 2010 celebrated the grand opening of their permanent facility.

YOU WANTED to KNOW!

Who does what to protect my drinking water?

The federal and provincial governments develop the Guidelines for Canadian Drinking Water Quality through a formal federal/provincial/territorial process with the participation of Health Canada, Environment Canada and each of the provinces and territories. In Ontario, the provincial government makes regulations under the Safe Drinking Water Act, including O. Reg. 169/03, the Ontario Drinking Water Quality Standards. Ontario Ministry of the Environment staff enforce the Safe Drinking Water Act and its regulations, while municipalities and private water suppliers are responsible for the day-to-day operations of the drinking water systems. Individuals can also contribute. To find out how you can help, visit our additup website at **additupontario.ca**

A Common Goal

We maintain the safety net through shared responsibility with our partners — municipalities, drinking water system owners and operators, local health units and other stakeholder groups.

With our partners, we have forged a common goal of pursuing continuous improvement. Our inspection programs and certification and training for drinking water system operators are continually reviewed and evolve to focus on adopting the best available practices.

It is also important for us to continuously engage with the public and inform Ontarians of what we are doing. We do this through our annual reports on drinking water, participating in trade shows, conferences and other public events and through our website (**www.ontario.ca/drinkingwater**). We also reach out to stakeholders and the public to explain our work, discuss regulatory changes or seek advice.

These measures are examples of how we have completely overhauled our approach to protecting drinking water.

We've come a long way, and we will continue to strive for excellence.
I would like to assure everyone in Ontario that we remain ever vigilant and committed to providing you with the safest possible drinking water.
For more information on the safety net, visit **www.ontario.ca/drinkingwater**.

RECOGNIZING *EXCELLENCE*

Safety Net Wins Prestigious Award

Ontario's unique safety net for protecting drinking water has earned a number of accolades from across Canada and the world in recent years.

In 2009, the Institute of Public Administration of Canada (IPAC) lauded the safety net as a landmark achievement of Ontario's Ministry of the Environment. See **www.ipac.ca**.

IPAC AWARD FOR INNOVATIVE MANAGEMENT
PRIX IAPC POUR GESTION INNOVATRICE

The ministry's Drinking Water Management Division was awarded IPAC's prestigious Silver Innovative Management award, competing against 92 submissions from every level of government across Canada.

The theme of the 2009 IPAC awards competition was "Turnarounds: Transformations in Government and Society." The phrase readily captures how far the province's drinking water protection system has come since the tragedy at Walkerton.

"What impressed the [IPAC awards] committee is the significant turnaround that has occurred in drinking water protection in Ontario through the safety net program," said IPAC CEO Gabriel Sékaly.

Sékaly added that Ontario's safety net could serve as a model for other jurisdictions.

"It has all the components, an education component, a regulation component, a standards component," he said. "Quite obviously, a number of other countries have issues with drinking water ... and this kind of model is something that can be used in those countries to improve their drinking water systems."

And the people at IPAC are not the only ones who have noticed the change in Ontario. A 2008 poll conducted by Probe Research confirmed that Ontario has definitely turned a corner.

The poll found that respondents in Ontario were significantly more likely to say their drinking water had become safer since the Walkerton tragedy than respondents in most other provinces.

Your Drinking Water Sources

Your drinking water comes from one of the many lakes, rivers and groundwater supplies in this province. Protecting those sources of water is the crucial first facet of our safety net.

Each watershed has its own unique characteristics. The people who know this best are the local residents who live and work in the area.

That's why the Clean Water Act uses a unique approach, one where local committees, made up of residents in the watershed, work together to examine their sources of water and recommend a plan for protecting them.

With a total of 457 municipal drinking water systems and 1,119 water intakes and wells covered under the source protection program, it makes sense to rely on local knowledge and perspectives rather than trying to apply a one-size-fits-all solution.

To that end, 19 Source Protection Committees were formed across the province, bringing together municipalities, businesses, the health sector, and First Nations, as well as local residents. Generally, these committees are supported and overseen by Conservation Authorities who bring technical and communications support to the process as well as background in water management.

We have also invited First Nations communities to have their systems included in the source protection process. So far, the Six Nations of the Grand River and the Kettle & Stony Point First Nation have been formally included.

By January 2009, all the committees had submitted terms of reference for their work. These have now been approved by the Minister of the Environment.

The next step is for the committees to work on scientific assessment reports to identify existing or potential risks to the quality and quantity of source water in their areas. Some of the committees have already finished this work, such as the Mattagami Source

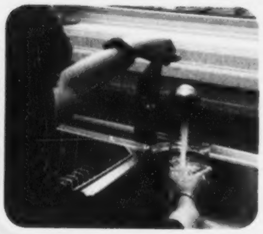
Protection Committee, and the rest of them are expected to do so by the end of 2010.

As they finish their reports, the committees will begin to prepare plans for protecting their sources of drinking water from existing and potential threats. They will also have to show the ministry how they plan to monitor their own progress in this area. In 2009 and 2010, we sought public input on the requirements for these source protection plans, which must be submitted to the ministry by August 2012. Based on this feedback, we finalized the regulation for source protection plans, which took effect on July 1, 2010.

The ministry has been supporting the source protection planning process by meeting with source protection committees, technical staff and consultants, developing technical bulletins and holding numerous technical sessions throughout Ontario. The meetings and training sessions are complementary to the partnership approach the ministry is using to implement the Clean Water Act.

As a commitment to making it easier for landowners and small businesses to be partners in source protection, we set up a stewardship funding program in 2007 to support projects proposed by individuals or groups for protecting land and water around local water wells or surface intakes as well as for informing the public about this issue. By the end of April 2010, over a thousand projects had been provided grants under this program, many of them already completed. For more information about drinking water source protection, go to **www.ontario.ca/cleanwater**.

CHIEF'S *PERSPECTIVE*



The effectiveness of the Source Protection Program lies in local community engagement, science and engineering-based threat assessments and development of practical solutions to address significant risks before they enter the drinking water treatment system.

YOU WANTED to KNOW!

How does my drinking water get from the source to my tap?

Your drinking water comes from surface water (lakes and rivers) or groundwater (aquifers) sources. The water is pumped from these sources to a drinking water treatment plant where it is treated and tested. From there, it goes through a network of pipes to reach the tap in your home or workplace. To learn more about drinking water systems and their sources, visit the Drinking Water Ontario website at **www.ontario.ca/drinkingwater**, and view the drinking water quality map.

Wells

We have also been active in supporting community initiatives aimed at helping rural well owners understand their responsibility to ensure that their wells are constructed in safe locations and protected from contaminants.

This includes our work with the Well Aware program run by the non-profit Green Communities Canada network. For more information on Well Aware, go to **www.wellaware.ca**. To watch a video on testing your well, go to the Drinking Water Ontario website at **www.ontario.ca/drinkingwater** under Resources for Wells.

We have also put together an easy-to-use manual, entitled *Water Supply Well - Requirements and Best Management Practices Manual*, which is written in plain language to explain the regulated responsibilities of well owners. For more information, see the manual on **www.ene.gov.on.ca/en/publications/water/index.php#8f**.

RECOGNIZING *EXCELLENCE*

Mattagami Source Protection Area: Fast Delivery

The members of the Mattagami Region Source Protection Committee had good reason to feel proud in early 2010. On January 19, it submitted its proposed assessment report to the ministry — the first committee in the province to do so. This is no simple feat given that they are responsible for a protection area that is twice the size of Prince Edward Island.

The report, which draws on two years of public consultations, is based on solid scientific research. The document is already being used to protect drinking water in Timmins, which draws its water supply from the Mattagami River.

The report identifies significant-, moderate- and low-risk areas in the city's water supply. "We want to make sure the public is as safe as we can," says George Hughes, chair of the committee that prepared the report.

The committee's members come from the municipality, the local mining, forestry and power generation sectors, the Gogama Local Services Board and local cottagers and residents.

"We made sure everyone was involved and had a say," Hughes said. The committee also solicited input from the public through open houses, 65 days of public consultations, special interest group meetings, advertisements and website postings.

The final source protection plan is due by August 2012.

From left to right: George Hughes, Mattagami Region Source Protection Committee Chair, Ian Smith, Director, Ministry of the Environment and Gary Scripnick, Mattagami Region Source Protection Authority Chair.

Provincial Summary Drinking Water Quality

I believe that everyone in Ontario is entitled to expect safe and high quality drinking water to come from our regulated systems. Once again this year, I am proud to report that the drinking water systems of this province continue to meet high standards.

In 2008-09, licensed laboratories submitted more than 639,000 microbiological, chemical and radiological test results to the ministry.

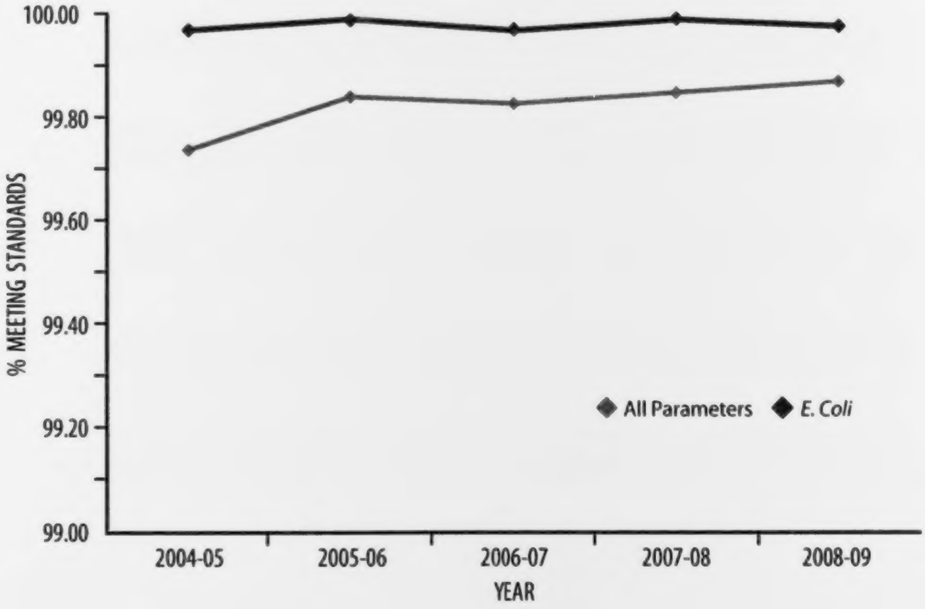
They found that 99.87 per cent of the tests for all parameters from our municipal residential drinking water systems met provincial standards.

These results, and similarly those for *E.coli*, have been consistently strong over the past five years as shown in **Chart 1**. See the **Proven Performance Results** section for detailed drinking water test results.

We observed similarly strong results for non-municipal year-round residential drinking water systems, such as residential developments and mobile home parks, where 99.40 per cent of the tests met provincial standards.

At systems serving designated facilities, such as day nurseries, schools and health care centres, 99.38 per cent of the tests met standards.

Chart 1: Municipal Residential Drinking Water Systems' Drinking Water Quality Test Result Trends



Ministry Monitoring Reports

The ministry tested selected source water and drinking water in Ontario for 46 pharmaceuticals and other emerging contaminants. We found that the compounds that were analyzed were either not detected in the treated drinking water or were present at levels that are well below the acceptable daily intakes for human health. If you'd like to know more about these tests, please read the *Survey of the Occurrence of Pharmaceuticals and Other Emerging Contaminants in Untreated Source and Finished Drinking Water in Ontario* at **www.ene.gov.on.ca/publications/7269e.pdf**.

We also completed a report on pesticides in drinking water for the period of 1986 to 2006. The pesticide detection rate in treated surface water decreased from 86 per cent to 3 per cent. Most groundwater systems had no pesticide detections in treated water. To find out more about these results, please read the report *Pesticides in Ontario's Treated Municipal Drinking Water, 1986-2006* at **www.ene.gov.on.ca/publications/7407e.pdf**.

In addition, we collect and analyze tens of thousands of samples from our water, sediment and aquatic life across this province. To find out more on these tests, check out the *Water Quality in Ontario 2008 Report* at **www.ene.gov.on.ca/publications/6926e.pdf**.

Provincial Summary Drinking Water Inspection Program

Inspection Results for Municipal Residential Drinking Water Systems

One of the most important aspects of our drinking water safety net is the ministry's rigorous annual inspection program. The inspections carried out every year help determine how well each drinking water system is meeting the province's strict regulations.

I am proud to say that the results for 2008-09 confirmed that our 700 municipal residential drinking water systems are indeed performing well. We found that 49 per cent of these systems achieved a 100 per cent inspection rating, which means that

YOU WANTED to KNOW!

How is my drinking water treated?

Your drinking water is treated in a multi-step process. If you get your drinking water from a water treatment plant which uses chemically-assisted filtration and draws its water from lakes or rivers, here's what happens. First, after adding settling agents, coagulation occurs and removes any larger particles from the water by settling them out. Then, the smaller particles are removed through filtration by passing the water through a bed of sand, gravel or charcoal. Finally, the water is disinfected with chlorine before it enters the distribution system and a chlorine residual amount is maintained in the drinking water as it makes way to your tap.

For more information, visit the Walkerton Clean Water Centre's animated tour of a drinking water plant at **www.wcwc.ca/AnimatedDemo/index.html.**

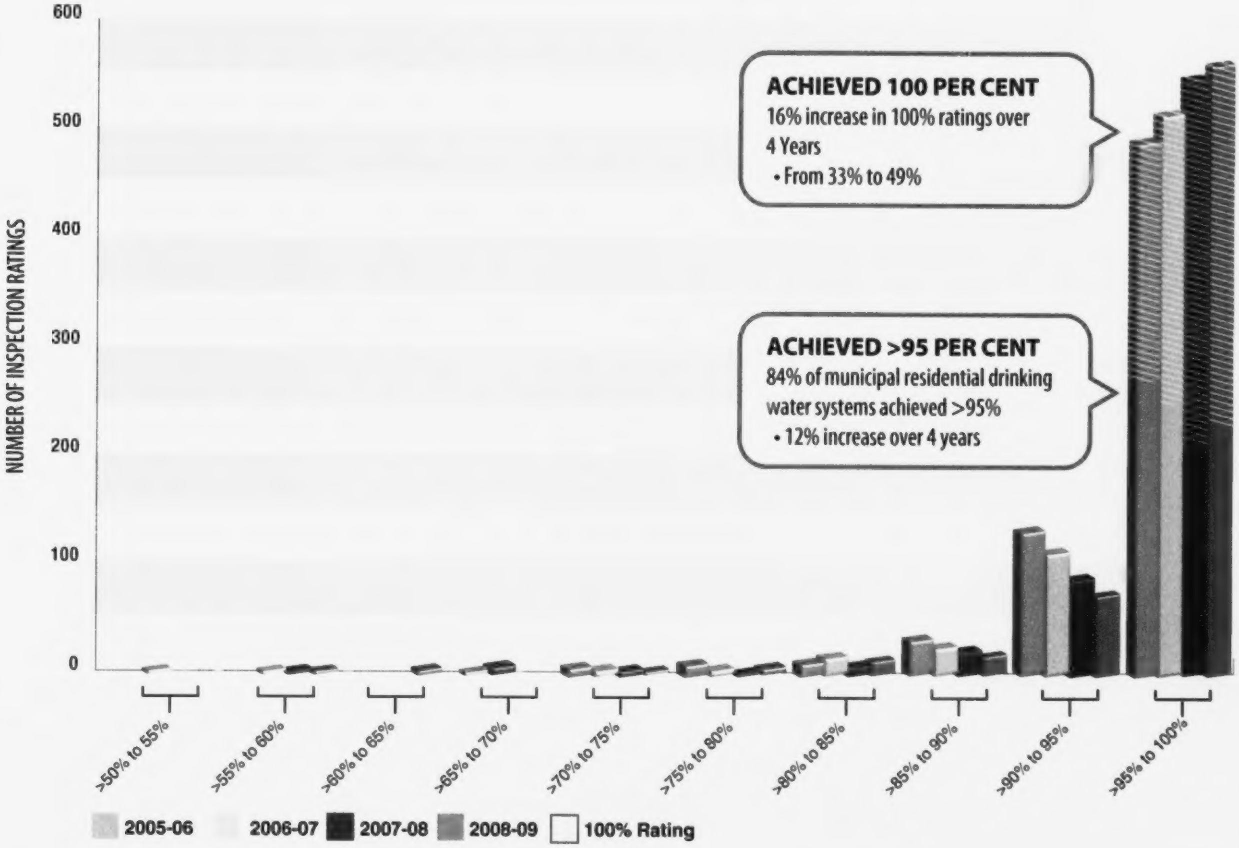
they were in full compliance with the regulations. These results are in line with those from 2007-08 and a 16 per cent improvement over the past four years.

It is encouraging that 84 per cent of the inspection ratings were 95 per cent or higher, which marks a 12 per cent improvement over four years. Also, 95 per cent of the inspection ratings were 90 per cent or higher. **Chart 2** demonstrates municipal residential drinking water system inspection ratings improvements over four years.

These results highlight our commitment to achieving excellence through continuous improvement.

Looking ahead, we will continue to strive toward our goal of achieving 100 per cent inspection ratings for all of the systems. For more information, see the Proven Performance Results section — **2008-09 Drinking Water Systems Inspections Program Report**.

Chart 2: Municipal Residential Drinking Water Systems' Inspection Rating Trends



ACHIEVED 100 PER CENT
16% increase in 100% ratings over 4 Years
- From 33% to 49%

ACHIEVED >95 PER CENT
84% of municipal residential drinking water systems achieved >95%
- 12% increase over 4 years

RECOGNIZING *EXCELLENCE*

Innovative Approaches to Water Treatment

The Raymond A. Barker Water Filtration Plant, in Collingwood, draws water from Nottawasaga Bay and treats water for the Towns of Collingwood, New Tecumseth, Baxter, New Lowell and Blue Mountains. In 1998, the Town of Collingwood decided to build a state-of-the-art water treatment facility and chose a unique Ontario-made technology that uses hollow-fibre membranes for filtering water.

Gary Carscadden is a Compliance Officer for the facility and is keenly aware of the advantages offered by this system. It provides an absolute barrier for pathogen removal from raw water. Once the membranes filter the water, it is disinfected and sent to users as drinking water. As chemicals are not used for treatment, the waste water from the filtration system is blended with untreated lake water and sent to local industries for their non-potable use. This conserves potable water use and is one-fifth the cost of potable water.

Membrane ultra-filtration system in use at a water treatment plant.

As well, the required plant surface area is more compact than conventional plants which means energy reductions and cost savings. "We will be adding modules to our plant to treat more water but the size of the plant's footprint can remain the same," says Carscadden.

There has been keen interest from around the world in this innovative technology. Carscadden notes, "We were the first municipal facility in Ontario to use this technology. Over 1,500 people have visited us from around the world and we have served as an international training centre."

Inspection Results for Non-Municipal Year-Round Residential Drinking Water Systems and Systems Serving Designated Facilities

We carried out 259 inspections of non-municipal year-round residential drinking water systems and systems serving designated facilities in 2008-09. We also inspected nine local services boards, which provide local water services in areas that have no municipal structure.

While these facilities produce treated drinking water that met our standards, non-compliance with drinking water regulations continues to be an issue with non-municipal year-round residential systems and systems serving designated facilities. We are working with the owners and operators to improve their level of compliance using a number of approaches, including providing them with information kits and giving our inspectors more tools for handling specific situations.

RECOGNIZING *EXCELLENCE*

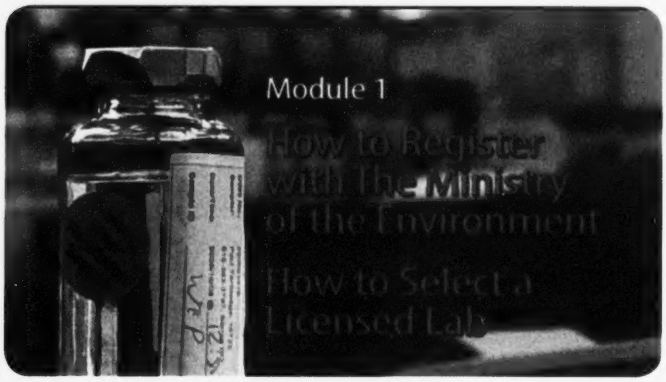
New Video Helps Drinking Water Systems Reach Compliance

Brent Bigelow takes his drinking water system responsibilities very seriously. As the owner of the Meadow Brook modular home park in Hawkesbury, Bigelow oversees a system that provides 30 people in this eastern Ontario town with safe water to drink.

Bigelow is one of several drinking water system owners and operators whose work is featured in the ministry's new video, *Your System, Your Responsibility: Eight Steps to Keep Your Water Safe.* The video provides non-municipal system owners with practical information and advice on how to comply with drinking water regulations, and explains why their work is vitally important for public health in this province.

Bigelow believes strongly in the benefits of the video as a learning tool. "Visuals stick in your mind more than written material," he says. "For example, it's more effective to see how to take a water sample rather than just reading about it. The ministry inspector did an excellent job demonstrating the sampling and other requirements."

Bigelow notes that many different people are featured in the video, driving home the point that safe water is important to all of us. He also likes the video animations. "They give you time to reflect on what you've seen and serve as a bridge to the next idea."


Module 1
How to Register with The Ministry of the Environment
How to Select a Licensed Lab

"There should be more videos like this one," adds Bigelow. "It is a very useful tool and will help owners of drinking water systems follow the regulation."

Check out the video on the Drinking Water Ontario website at **www.ontario.ca/drinkingwater** under Resources for Non-Municipal Owners. You can also order it from the ministry's Public Information Centre by calling them at their toll free number which is **1-800-565-4923**, or **416-325-4000** in Toronto.

RECOGNIZING *EXCELLENCE*

Getting the Lead Out

Under O. Reg. 243/07, public schools, private schools and some day nurseries are required to flush their plumbing and test their drinking water for lead.

A number of facilities have taken the initiative to go above and beyond their legislative requirements to protect the health of their students and children in their care.

One school board took the initiative of preparing a presentation on drinking water protection for all of the independently owned day nurseries operating within schools under its jurisdiction. The presentation helped to ensure that all the day nursery operators understood their responsibilities under the regulation.

Another private school conducted extensive testing throughout its facility. Samples taken from more than 45 locations in the building identified a specific section of plumbing as a potential lead source. This section of plumbing was promptly replaced and lead concentrations in flushed drinking water samples now consistently meet the standard.

Another school board conducted an extensive audit of some 1,000 drinking fountains. The tests of flushed drinking water samples found no lead problems. They also have actively promoted the use of reusable water bottles.

One public school replaced all of its drinking water fountains with new filtered models after initial testing in 2007 found excessive levels of lead in both standing and flushed samples. Test results on the new fountains indicated that the levels of lead are well within acceptable limits.

Inspection Results for Schools and Day Nurseries

As part of our Lead Action Plan, we require day nurseries as well as public and private schools to flush their taps, submit samples to laboratories licensed to test drinking water and keep records on their findings.

I am pleased to report that we have seen a steady improvement in the compliance of day nurseries and schools with these sampling requirements since the lead inspection program was launched in 2007-08.

Private schools were a key focus of our inspections in that first year. The independent status of these schools meant the ministry had to work harder to reach private school operators to ensure that they were aware of, and understood, the new lead testing requirements under O. Reg. 243/07. Also this group does not have a central association through which we could distribute education and outreach materials. I am happy to report that there has been an improvement in this area as well.

Municipal Licensing Program

We have made good progress on our licensing program for municipal drinking water systems. By the end of April 2010, we had issued 109 licences to 49 municipalities. Another 489 applications from 251 municipalities were being processed. All remaining licence applications were received by the ministry by June 2010.

The licences replace the old system, which was based on certificates of approval issued to municipalities for the design, construction and operation of drinking water systems.

The new licensing program emphasizes the ongoing quality management of the system and requires all municipal drinking water system owners to meet Ontario's stringent Drinking Water Quality Management Standard. This standard requires them to utilize the best available practices and work to continuously improve their performance. This unique standard was developed by the ministry in partnership with Ontario's drinking water sector stakeholders, including owners and operating authorities and water-related associations such as the Ontario Water Works Association and the Ontario Municipal Water Association.

Building a system of this kind requires effectively trained operators. That's why we have created specialized courses for drinking water system operators to give them the expertise they need to manage their facilities.

A drinking water plant operator checks equipment.

We also held several education and outreach sessions that focused on providing additional guidance and assistance to owners and operating authorities on the licensing program.

Ontario is the first jurisdiction in North America to adopt this quality management system.

I am proud to say that the licensing program has caught the attention of other drinking water system managers in North America who are looking to improve their own practices.

Our experts have delivered quality management-related courses on risk assessment to water works officials in Newfoundland and Labrador, Nova Scotia and New Brunswick.

We also continue to work closely with the municipal owners and operating authorities of drinking water systems in this province to protect the quality of your drinking water.

This year, a survey of newly licensed owners and operating authorities found that the program has helped municipalities work together and share information on the best practices in drinking water system management.

This is yet another example of how a collaborative approach has resulted in a well managed program that provides high quality drinking water to Ontarians.

RECOGNIZING *EXCELLENCE*

Benefits of the Municipal Drinking Water Licensing Program

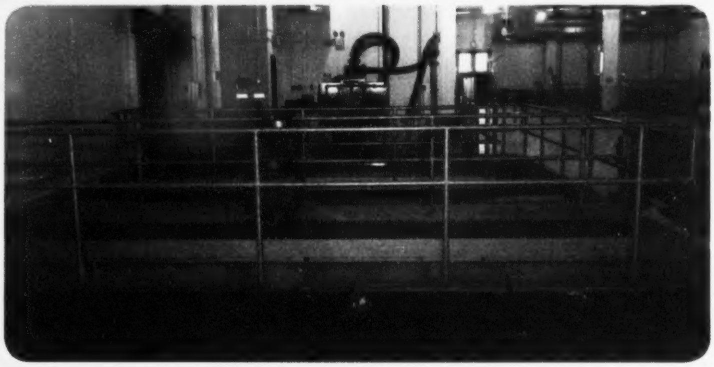
Ontario's groundbreaking licensing program for municipal drinking water systems incorporates the first quality management system (QMS) of its kind in North America, and builds continuous improvement into day-to-day operations. The QMS holds system owners to high standards for operating and managing their drinking water systems.

Lou Silani sees the QMS as an absolute must for drinking water systems. As the Drinking Water Quality Management System Representative for the Tecumseh Distribution System, Silani is responsible for a network of drinking water pipes that serves 24,000 people living in and around the town of Tecumseh in southwestern Ontario. It is a 209 square kilometre stretch of territory encompassing both urban and rural landscapes.

"Water is a necessity for good health, and we're stewards of the infrastructure that provides the water," says Silani. "I strongly believe in the municipal licensing program — it makes for continuous improvement, transparency and accountability. We developed policies and procedures which were either not present or not user friendly, which have helped us with continuous improvement in all facets of our operation."

He thinks it is best for the owners and operators of each drinking water system to develop their own plans.

"If you do it, you own it. All levels in the organization have input and understand the roles they play in the system. Because the Town Council needed to approve the plan, the process increased Council's awareness of the importance of our QMS. We recognize that it is a living document and can be adapted later on as necessary."



Training System Operators

Ultimately, the strength of our safety net for drinking water rests on the people who operate and manage our systems. That's why our training requirements for drinking water operators are among the most stringent in North America.

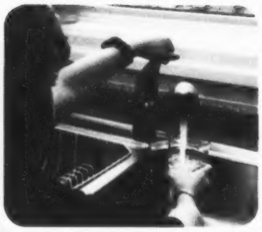
Drinking water operators must complete a rigorous training program at the beginning of their careers. Once they are on the job, they must continue to take 20 to 50 hours of training each year to maintain their certification. Operators can hold different types of certificates, depending on the type of drinking water system for which they are responsible. As of the end of March 2009, there were 5,946 certified drinking water operators in the province holding 7,978 certificates.

The world-class Walkerton Clean Water Centre plays an essential role in this area. In 2008-09, the Walkerton Clean Water Centre coordinated and delivered training for 6,148 course participants.

In 2010, it reached a new milestone with the opening of a 19,150 square foot facility featuring state-of-the-art technological facilities and classrooms in the town of Walkerton. The centerpiece of the new facility is the technology demonstration centre, which offers invaluable hands-on training to participants.

The Walkerton Clean Water Centre also launched a third mobile unit in 2009 to enhance its ability to offer training to operators in remote communities.

CHIEF'S *PERSPECTIVE*



Ontario's drinking water operators can take great pride in the fact that they are among the best-trained in the world and have access to state-of-the-art practical training through the Walkerton Clean Water Centre.

YOU WANTED to KNOW!

Are there career opportunities in drinking water protection?

Municipal water and wastewater systems require a range of skilled and knowledgeable professionals including engineers, technicians, operators, electricians and other trades. Universities, research facilities and Ontario's water technology industry employ scientists and researchers. Hydrogeologists, inspectors, planners and resource managers also play vital roles and all of these professionals make a positive contribution to their communities.

Ontario's colleges and universities can help you prepare for a career in the water sector. The Walkerton Clean Water Centre also offers training for professionals to build upon their knowledge and skills. For more information visit **www.ontario.ca/drinkingwater** and select 'Students' under 'Select a View' and visit the Youth web page.

Message from the Chief Medical Officer of Health — Small Drinking Water Systems Program Update

As Ontario's Chief Medical Officer of Health, I would like to take this opportunity to provide an update on the Ministry of Health and Long-Term Care's Small Drinking Water Systems Program for the months leading up to proclamation of the new regulatory framework and the first four months of the program's implementation.

On December 1, 2008, responsibility for regulating Ontario's estimated 18,000 small drinking water systems (SDWS) that do not serve a designated facility, was transferred to the Ministry of Health and Long-Term Care from the Ministry of the Environment.

These systems supply drinking water to the public at locations such as restaurants, seasonal trailer parks and campgrounds, community centres, libraries, motels, resorts and places of worship as well as other public facilities, such as municipally owned airports and recreation facilities where drinking water is not supplied from a municipal system.

The Small Drinking Water Systems Program, which applies a new risk-based approach for regulating SDWS, is being administered by local boards of health. This means owners and operators of a SDWS are being contacted to arrange a visit from their local public health inspector. The public health inspector will conduct a site-specific risk assessment on each system and, based on the assessment, the inspector will determine what the owner and operator need to do to protect their drinking water. The local board of health will then issue a directive that outlines basic operating requirements (e.g., water sampling and testing frequency, and record maintenance) to assist the owner/operator to adequately maintain and supervise the drinking water they provide to the public.

The ministry has undertaken a comprehensive implementation strategy that ensures training, tools and support are available to staff from all local boards of health during the Small Drinking Water Systems Program start-up.

The transfer of oversight for the Small Drinking Water Systems Program to the Ministry of Health and Long-Term Care is a good example of how Ontario has continued to help safeguard drinking water sources and treatment systems through effective partnerships with provincial and local public health officials.

These partnerships further strengthen Ontario's drinking water safety net and demonstrate leadership in drinking water protection.

The Ministry of Health and Long-Term Care shares the Ministry of the Environment and its partners' commitment to excellence through a continuous improvement approach. Safe drinking water is an expectation shared by all who live in Ontario. The Small Drinking Water Systems Program contributes to that expectation.

I want to take this opportunity to thank the local boards of health and all of our drinking water partners for their efforts and continued support and commitment to safeguarding the health of all Ontarians.

Arlene King, MD, MHSc, FRCPC
Chief Medical Officer of Health
Ministry of Health and Long-Term Care

For more information about the MOHLTC Small Drinking Water System Program, please see: **www.health.gov.on.ca/english/public/program/pubhealth/safewater/safewater_resources.html**.

The Licensed Laboratories

Safeguarding Ontario's drinking water involves not only regular testing of the drinking water itself, but also regular inspections of those who are doing the testing.

All laboratories that perform tests on the province's drinking water must be accredited, licensed and inspected regularly and those outside of Ontario analyzing Ontario's drinking water must be on the Director's Eligibility List. There were no eligible laboratories on the list in 2008-09.

Ontario is the only jurisdiction in the world that requires laboratories to go through all three of those steps before they can test even a single sample.

I am happy to say that laboratories have been performing well. In 2008-09,

RECOGNIZING *EXCELLENCE*

Licensed Laboratories Protect Public Health

The laboratories licensed by the Ministry of the Environment to test drinking water play a vital role in protecting public health.

Dr. Nilou Ghazi, who is the laboratory manager of E3 Laboratories in Niagara-on-the-Lake, is well aware of her responsibilities. "This is not just a job," says Ghazi. "It is my duty to protect the health of the public and we take this role very seriously."

Ghazi's laboratory has been licensed since 2003 and serves clients from across the province.

In a recent interview, Ghazi described how the ministry's licensing standards and bi-annual inspections give her the confidence that her laboratory is strictly following every requirement of the testing system.

"I find the Ministry of Environment staff very knowledgeable and helpful. They ensure that we are providing the best possible service."

The staff at her laboratory are scrupulous in following procedures for quality control to ensure accurate detection of contaminants such as *E. coli.* Such results are checked and re-checked.

Ghazi adds that it is also important to be accessible to clients and to provide quick test results.

"Fast analysis of samples and resamples reassures the public and clients that the corrective action that was taken to eliminate the contamination was effective. Once we did a resample at 2:00 a.m. because we knew the importance of quick communication."

An Ontario drinking water laboratory inspector and a laboratory technician during a licensed laboratory inspection.

all 52 of the licensed laboratories were inspected at least twice.

In 2009, we also streamlined our regulations on testing drinking water to give inspectors more flexibility and make it easier for them to carry out on-site tests at drinking water systems and clarify what samples are exempt from licensed laboratory requirements when used for research purposes. For more information on this regulation (O. Reg. 248/03), visit the Drinking Water Ontario website at **www.ontario.ca/drinkingwater** under Resources for Laboratory Drinking Water Testing and Licensure.

DRINKING WATER *FACTS*

Door-to-Door Testing of Drinking Water

If a test of your tap water produces a brown substance, is it safe to drink? The truth is that such tests are absolutely meaningless in terms of assessing the safety of the water. Unfortunately, some door-to-door salespersons have been causing unnecessary concern among Ontarians with such tests as a way of luring people into buying costly reverse osmosis treatment units.

How do the tests work? First, they use an electric current to activate naturally occurring minerals and make the water turn brown. Then, the treatment removes the minerals from the water, making the brown substance disappear. The test does not and cannot identify contamination that could cause illness. In Ontario, only fully accredited laboratories licensed to perform drinking water testing — not such home-based testers — are authorized to perform health-based tests on drinking water. Our stringent standards for these labs make the province's municipal tap water among the best protected in the world. The people of Ontario can have confidence that their tap water is safe to drink.

John Stager, Ontario's Chief Drinking Water Inspector, says: "If you have been approached by someone offering to test your drinking water, and you have concerns, I advise you to contact your municipality, or your local health unit — they can answer any questions you may have. If a salesperson claims that your drinking water is unsafe or claims to be testing the safety of your drinking water, please contact the Ministry of the Environment immediately and we will follow up."

To contact the Ministry of the Environment, call our Public Information Centre at our toll free number of **1-800-565-4923**, or **416-325-4000** in Toronto. If fraud is suspected, you may also contact your local police force or the Ministry of Consumer Services at **416-326-8800** in Toronto or **1-800-889-9768** toll-free.

At the Tap

Lead Testing in Our Communities

Our ministry's rigorous community Lead Action Plan, introduced in 2007, shows how effective our safety net has become. We launched the program right after tests that same year found lead in the drinking water of older homes in London.

The plan requires both municipal and non-municipal drinking water systems as well as schools and day nurseries to test for lead at the tap.

I am pleased to announce that two years of testing have found that the majority of these tests met Ontario's rigorous standards for lead.

These excellent results have enabled us to change the regulation on lead testing for drinking water systems. Systems that serve less than 50,000 people will now be allowed to apply for an exemption from lead testing in plumbing based on a history of good sample results.

On the other hand, lead testing will continue in systems that require it and can be reintroduced for exempt systems at any time if we find it necessary.

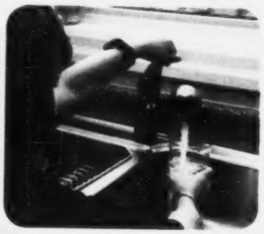
The changes also clarified some of the rules on testing the drinking water in small municipal and non-municipal drinking water systems.

This approach is more efficient than a one-size-fits-all testing system. It eases the testing burden on those drinking water systems that clearly demonstrated no issues with lead, while maintaining Ontario's stringent drinking water standards. For more information on O. Reg. 170/03, visit **www.ontario.ca/drinkingwater**.

The data from the 2008 summer and 2008-09 winter sampling periods have shown consistently good results. Our lead test samples come from two sources: plumbing and distribution. Plumbing samples are taken from drinking water taps in homes or businesses, while distribution samples are taken from a drinking water system's distribution pipes.

The second round of testing (June-October 2008) found that 96.9 per cent of the plumbing samples met the Ontario standard for lead. 97.9 per cent of plumbing samples met the standard in the third round (December 2008-April 2009).

CHIEF'S *PERSPECTIVE*



Extensive sampling for lead in drinking water has clearly demonstrated that the majority of drinking water systems do not have issues with lead. However, in those circumstances where lead is detected in concentrations above the provincial standard, clear requirements exist for ongoing monitoring and action.

For distribution systems, which cover the network of pipes providing water to users, a total of 98.7 per cent met the standard in the second round of tests, and 98.3 per cent met the standard in the third round. For more information, see the Proven Performance Results section — **2008-09 Drinking Water Quality Report**.

RECOGNIZING *EXCELLENCE*

Learning Is Fun!

A children's water festival is a lot of fun. The kids and their teachers play games, watch puppet shows, explore the natural environment, and sing catchy songs — all while learning important lessons about the water cycle and the significance of water resources in everyday life.

A decade ago there were just four children's water festivals in Ontario. Today, there are more than two dozen. Last year, they attracted 60,000 students.

And new festivals keep starting up all the time. Still, the demand is so strong that many of them are over-subscribed. Teachers like Shannon Matsuo from Elizabeth Ziegler Public School in Waterloo have learned to book early.

She brought her Grade 2 class to a water festival last year for the first time. "It was a fabulous educational experience," she says. "I've signed up again this year. We're going."

Children's water festivals are constantly evolving to stay current with the changing curricula for Grades 2-5. "It's like a jigsaw puzzle," says Susan Reid, Program Coordinator for the Children's Water Education Council, which receives financial support from the Ministry of the Environment.

"At a festival, students get little pieces of the puzzle and go back to the classroom to make it all work to understand the bigger picture. There's a high level of energy when kids and water get together. It's contagious to watch that energy and see kids learn," says Reid.

To learn more about the Children's Water Education Council or to find out about festivals being held in your area, visit the council's website at **www.cwec.ca**.

The Chief Drinking Water Inspector at a Children's Water Festival.

Lead Testing at Schools and Day Nurseries

One of our priorities with the Lead Action Plan is to protect Ontario's most vulnerable residents from exposure to lead in drinking water. Children are particularly vulnerable to the negative effects of lead and that is why we have put a lot of effort into safeguarding the drinking water at schools and day nurseries.

Since 2007, all public and private schools have been required to test their drinking water and flush their taps, depending on the age of their plumbing.

I am pleased to say that the large majority of our schools and day nurseries do not have a lead problem in their drinking water.

In 2008, records indicated that 85.9 per cent of samples taken before the plumbing had been flushed at day nurseries and schools met our lead standards. After flushing, 94.8 per cent of the samples met the standards.

These scientific test results have led us to ease the regulations for schools and day nurseries that have conducted all required sampling and reported that all lead results met the standard for a period of at least 24 months.

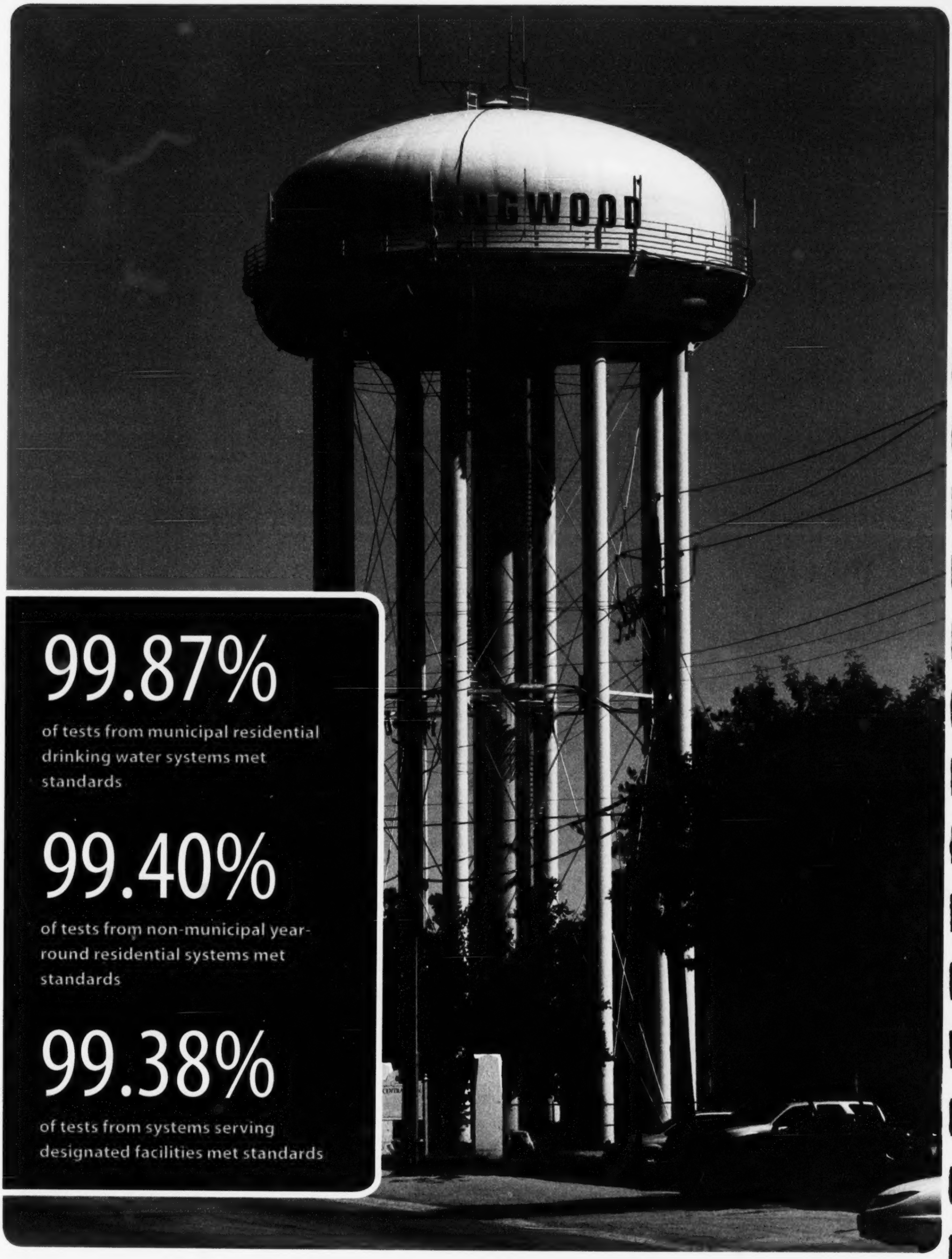
Schools or day nurseries where tests have shown that lead is a problem will be required to work with local public health officials to address and resolve the issue of lead in plumbing within the facilities.

We also want this to be a transparent process. We are requiring that schools and nurseries keep records on flushing and testing so that they can be made available to any member of the public who wants to see them.

In 2009, we also started requiring all day nurseries that were built after 1989 to test their drinking water annually for lead.

It is a major responsibility to help ensure safe, high quality drinking water. That means you, the public, and the ministry's many other stakeholders and partners have an important role to play in protecting our drinking water and it is important that you understand why you can be confident in its safety. Together, we will continuously improve our performance.

We will always strive to protect your drinking water, starting with its source in the many watersheds of this province, all the way to you turning on your tap.



99.87%

of tests from municipal residential drinking water systems met standards

99.40%

of tests from non-municipal year-round residential systems met standards

99.38%

of tests from systems serving designated facilities met standards

Proven Performance Results

This section provides details on the performance of the province's drinking water systems and licensed laboratories. Performance is assessed by evaluating both the quality of the drinking water that is produced and how well the system or laboratory does during an inspection.

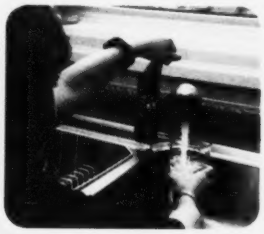
2008-09 Drinking Water Quality Report

Drinking water systems regularly submit samples to laboratories licensed to perform drinking water tests. These tests determine whether the drinking water meets Ontario's stringent drinking water quality standards. The requirements for testing, reporting and corrective actions, as well as other requirements are laid out in Ontario's Drinking Water Systems Regulation (O. Reg. 170/03). Regular and reliable testing is one of the key components of Ontario's drinking water safety net.

The 2008-09 test results clearly indicate that Ontario's drinking water systems continue to provide high quality drinking water to our taps. The data contained in this report covers the period from April 1, 2008 to March 31, 2009. The data is provided on three groupings of drinking water system categories, which are referred to as facility types, as follows:

- **Municipal residential drinking water systems:** municipally owned systems that supply drinking water to more than 80 per cent of Ontario's population
- **Non-municipal year-round residential drinking water systems:** privately owned systems that supply drinking water to residential developments and mobile home parks
- **Drinking water systems serving designated facilities:** for example, day nurseries, schools and health care centres.

CHIEF'S *PERSPECTIVE*



A key drinking water safeguard is the ongoing requirement for all drinking water systems to sample on a regular basis (over 600,000 individual test results annually) and undertake immediate action, where necessary.

Setting Drinking Water Quality Standards

Ontario uses 158 health-based quality standards for microbiological, chemical and radiological parameters to ensure the highest quality of drinking water. Ontario's Drinking Water Quality Standards are listed in O. Reg. 169/03 and are based on Health Canada's Canadian Drinking Water Quality Guidelines, with consideration of the advice from Ontario's Advisory Council on Drinking Water Quality and Testing Standards. These guidelines are routinely re-evaluated to ensure they reflect any new information about health implications or water treatment technologies that have become available. Standards are another key component of Ontario's drinking water safety net.

Test results are also summarized according to three key parameters: microbiological, chemical and radiological.

- **Microbiological:** Microbiological organisms include total coliforms and *Escherichia coli* (*E. coli*) bacteria. Their presence indicates microbiological contamination and the potential for serious health problems. For this reason, the drinking water standards for microbiological parameters require that total coliforms and *E. coli* should not be detected in drinking water. Mandatory reporting and corrective actions are also required for microbiological parameters.
- **Chemical:** Ontario's drinking water quality standards protect Ontario consumers by establishing the maximum acceptable concentration for chemical parameters, such as fluoride, lead, mercury and selenium, that can be present in drinking water. The frequency of testing for these chemical parameters depends on the type of chemical, the category of drinking water system, the size of the population the system serves and the water source.
- **Radiological:** Ontario has developed standards for various radionuclides in drinking water based on protecting the health and safety of consumers. A select number of drinking water systems are required to sample for radiological parameters under their Certificates of Approval.

YOU WANTED to KNOW!

What are drinking water quality standards?

The standards set limits for contaminants in drinking water. To date, the ministry has established standards for two microbiological parameters, 78 chemical parameters and 78 radiological parameters. Drinking water systems must meet these standards to be in compliance with our regulations. A list of the Ontario Drinking Water Quality Standards can be found in O. Reg. 169/03 at **www.e-laws.gov.on.ca/navigation?file=home&lang=en.**

In addition to the health-based standards mentioned above, the province has adopted operational parameters that set out desirable properties for various aspects of the water, such as colour, odour, taste or turbidity. These parameters also include chemicals such as sodium, iron and manganese.

Overview of the Performance of Drinking Water Systems

Drinking water quality tests determine if the level of a contaminant exceeds a provincial standard. An exceedance is considered an adverse water quality incident and must be reported immediately. Routine testing is completed to assess drinking water quality against the provincial standards. The Safe Drinking Water Act and its regulations specify testing requirements and actions to be taken in the event a standard is not met, which may include undertaking additional sampling and reporting to the ministry.

In 2008-09, 639,424 test results were submitted to the ministry by laboratories licensed to perform drinking water testing. The results revealed that 99.87 per cent of drinking water tests at municipal residential systems met Ontario's rigorous, health-based drinking water standards.

Table 1 summarizes the test results for each of the three drinking water facility types.

Table 1: Drinking Water Test Results for Drinking Water Systems

Facility Type	Per Cent of Drinking Water Tests Meeting Standards				
	2008-09	2007-08	2006-07	2005-06	2004-05
Municipal Residential Drinking Water Systems	99.87	99.85	99.83	99.84	99.74
Non-Municipal Year-Round Residential Systems	99.40	99.40	99.40	99.45	99.41
Systems Serving Designated Facilities	99.38	99.39	99.49	99.42	99.06

The consistently high quality test results over the past five years clearly demonstrate the effectiveness of the drinking water safeguards that have been put in place. Whenever test results found concentrations that exceeded the allowable limits permitted by the Ontario Drinking Water Quality Standards or a Certificate of Approval, corrective action was required to be taken.

Table 2 lists the number of registered drinking water systems and how many of them submitted test results.

Table 3 provides a listing of the number of drinking water systems serving various types of designated facilities.

Table 2: Number of Drinking Water Systems Registered with the Ministry and the Number of Systems Submitting Drinking Water Test Results for 2008-09

Facility Type	Number of Systems Registered	Number of Systems Submitting Drinking Water Test Results	Explanation for Difference Between Systems Registered and Systems Submitting Results
Municipal Residential Drinking Water Systems	700	694	Supplied Water[1] System not operational[2]
Non-Municipal Year-Round Residential Systems	466	410	Supplied Water[1] or Cistern System[3] or No samples were uploaded to the ministry and owners have been contacted to resolve the issue.
Systems Serving Designated Facilities	1,663	1,444	

[1] Systems with agreements in place to have their water supplied by (other) municipal residential drinking water systems and those systems performed the sample collection and submission.

[2] System was registered with the ministry but was not operational for the majority of the fiscal period and therefore not required to sample and have test results submitted.

[3] Systems that receive drinking water for their cistern from municipal residential drinking water systems, which carry out the required sampling.

Table 3: Number of Registered Systems Serving Different Types of Designated Facilities as of March 31, 2009

Primary Function of Systems Serving Designated Facilities	Number of Systems Serving Designated Facilities	
	2008-09	2007-08
School[1]	638	630
Social Care	509	481
Health Care	112	114
Children's Camp	403	392
Other	1	14
Total	1,663	1,631

[1] Includes public schools, private schools, universities and college facilities. In some cases, the drinking water system serves both a school and health care facility or social care facility.

Municipal Residential Drinking Water Systems

Municipal residential drinking water systems provide drinking water to more than 80 per cent of Ontario residents. These systems had the best test results of any facility type, with 99.87 per cent of the tests meeting Ontario's drinking water standards. This is quite significant given that 521,282 tests were conducted on drinking water samples from 694 municipal residential drinking water systems. Of these, 99.89 per cent of the microbiological and 99.70 per cent of the chemical test results met the provincial standards. No exceedances for radiological parameters were found.

Non-Municipal Year-Round Residential Drinking Water Systems

A total of 39,806 drinking water samples from 410 non-municipal year-round residential drinking water systems were also tested. The results showed that 99.40 per cent of all tests for these systems met Ontario standards. Of these, 99.39 per cent of the microbiological and 99.45 per cent of the chemical test results met provincial standards. No radiological tests were conducted in 2008-09 for drinking water from non-municipal year-round residential drinking water systems.

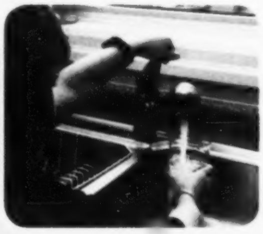
Systems Serving Designated Facilities

A total of 78,336 tests were conducted on drinking water samples from 1,444 systems serving designated facilities. The results showed that 99.38 per cent of those tests met provincial standards. Of these, 99.42 per cent of the microbiological and 99.27 per cent of the chemical test results met provincial standards. No radiological tests were conducted in 2008-09 for drinking water from systems serving designated facilities.

Inspectors continue to work with non-municipal year-round residential drinking water systems and those serving designated facilities to help them meet compliance requirements. In 2009-10, the ministry completed inspections of all remaining registered non-municipal year-round residential drinking water systems.

In line with the last four years, the test results shown in **Table 4** confirm once again this year that Ontario's drinking water systems are delivering high quality water to our taps. Ontarians can continue to be confident in the quality of their drinking water.

CHIEF'S *PERSPECTIVE*



Trends in drinking water sample results continue to demonstrate the high quality of Ontario's drinking water, with 99.87 per cent of test results from regulated systems meeting stringent drinking water quality standards.

Table 4: Summary of Drinking Water Test Results for All Facility Types from April 1, 2008 to March 31, 2009

Facility Type	Parameter	# of Systems Submitting Results	# of Systems with Exceedances	# of Results	# of Exceedances	% Exceedance	2008-09 % Meeting Standards
Municipal Residential Drinking Water Systems	*E. coli*	690	32	232,182	40	0.02	99.98
	Total Coliform	690	198	232,308	455	0.20	99.80
	Total Microbiological	690	198	464,490	495	0.11	99.89
	Chemical[1]	676	47	56,778	173	0.30	99.70
	Radiological	2	0	14	0	0.00	100.00
	TOTAL	**694**	**233**	**521,282**	**668**	**0.13**	**99.87**
Non-Municipal Year-Round Residential Systems	*E. coli*	409	5	15,834	7	0.04	99.96
	Total Coliform	409	83	15,819	185	1.17	98.83
	Total Microbiological	409	83	31,653	192	0.61	99.39
	Chemical[1]	319	9	8,153	45	0.55	99.45
	Radiological	0	0	0	0	Not applicable	Not applicable
	TOTAL	**410**	**90**	**39,806**	**237**	**0.60**	**99.40**
Systems Serving Designated Facilities	*E. coli*	1,429	12	27,973	18	0.06	99.94
	Total Coliform	1,430	176	27,991	307	1.10	98.90
	Total Microbiological	1,430	176	55,964	325	0.58	99.42
	Chemical	1,193	44	22,372	163	0.73	99.27
	Radiological	0	0	0	0	Not applicable	Not applicable
	TOTAL	**1,444**	**215**	**78,336**	**488**	**0.62**	**99.38**

[1] Lead results are not included as they are reported in the **Lead Action Plan Drinking Water Results**.

2008-09 Drinking Water Test Results

Microbiological Test Results

Corrective action is required to be taken immediately whenever microbiological exceedances are detected in drinking water from regulated drinking water systems. *E. coli* test results for 2008-09 given in **Charts 3**, **4** and **5** can be summarized as follows:

- Five per cent of municipal residential drinking water systems, that submitted samples, reported the presence of *E. coli*, and of these, five systems reported multiple *E. coli* exceedances
- One per cent of non-municipal year-round residential drinking water systems, that submitted samples, reported the presence of *E. coli*, and of these, two systems reported multiple *E. coli* exceedances
- One per cent of systems serving designated facilities, that submitted samples, reported the presence of *E. coli*, and of these, two systems reported multiple *E. coli* exceedances.

CHART 3: Test Results for *E. coli* from Municipal Residential Drinking Water Systems

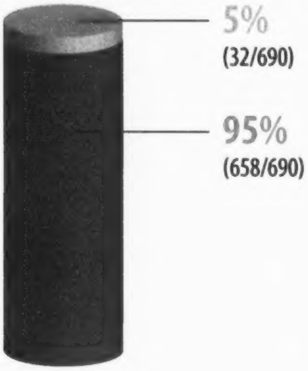


CHART 4: Test Results for *E. coli* from Non-Municipal Year-Round Residential Drinking Water Systems

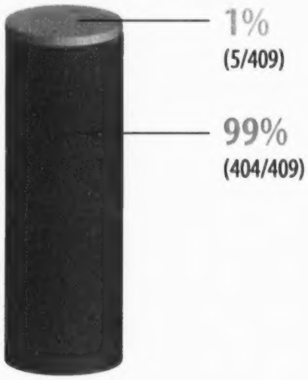
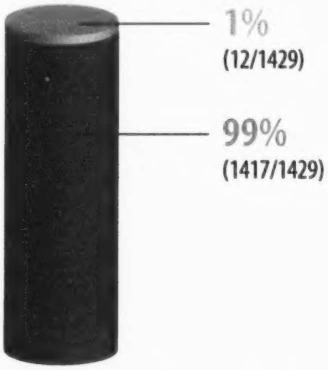


CHART 5: Test Results for *E. coli* from Drinking Water Systems Serving Designated Facilities



■ Drinking water systems that met *E. coli* standards in 2008-09

▨ Drinking water systems with *E. coli* standard exceedances in 2008-09

Chemical Test Results

Chemical test results for 2008-09 given in **Charts 6**, **7** and **8** can be summarized as follows:

- Seven per cent of municipal residential drinking water systems, that submitted samples, reported chemical exceedances
- Three per cent of non-municipal year-round residential drinking water systems, that submitted samples, reported chemical exceedances
- Four per cent of systems serving designated facilities, that submitted samples, reported chemical exceedances.

For radiological test results, none of the municipal residential drinking water systems reported exceedances.

Table 5 lists the various chemical parameters that drinking water tests measure and the number of chemical exceedances that were reported during 2008-09 by the three facility types.

CHART 6: Test Results for Chemical Parameters from Municipal Residential Drinking Water Systems

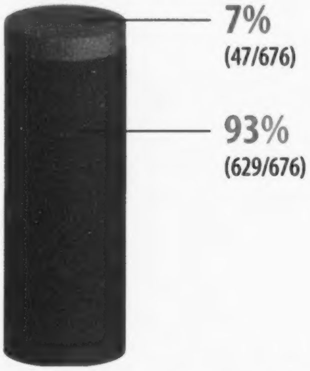


CHART 7: Test Results for Chemical Parameters from Non-Municipal Year-Round Residential Drinking Water Systems

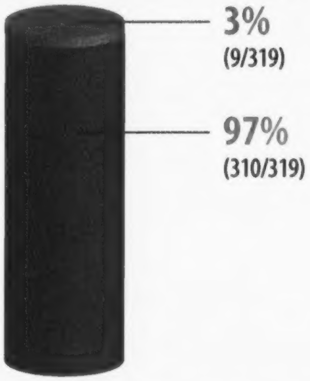
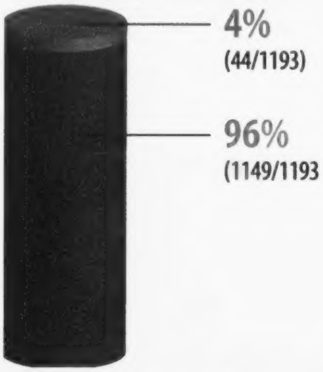


CHART 8: Test Results for Chemical Parameters from Drinking Water Systems Serving Designated Facilities



■ Drinking water systems that met chemical standards in 2008-09

■ Drinking water systems with chemical standard exceedances in 2008-09

Table 5: Number of Chemical Standard Exceedances by Facility Type for 2008-09

Parameter	Number of Exceedances		
	Municipal Residential Drinking Water Systems	Non-Municipal Year-Round Residential Systems	Systems Serving Designated Facilities
1,2-dichloroethane	0	0	2
Benzo[a]pyrene	0	1	3
Fluoride	76	8	33
Lead[1]	Not applicable	Not applicable	12
Nitrates (as Nitrogen)	2	13	50
Nitrite (as Nitrogen)	0	0	2
Nitrogen: Nitrate + Nitrite	2	13	60
Selenium	6	0	0
Trihalomethanes	87	5	0
Uranium[2]	0	5	1
Chemical Total	**173**	**45**	**163**

[1] Lead results are not included here for municipal residential drinking water systems, non-municipal year-round residential drinking water systems and systems serving public schools, private schools or day nurseries, as they are reported in the **Lead Action Plan Drinking Water Results**. Lead results for other systems serving designated facilities, such as health care and social care facilities, are included.

[2] In some parts of the province, there are naturally occurring deposits of uranium.

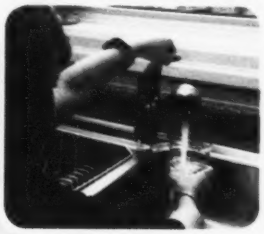
Adverse Water Quality Incidents

Swift, strong action on Adverse Water Quality Incidents is a critical component of Ontario's drinking water safety net. This ensures effective oversight, strict monitoring and prompt action if an event occurs.

Under O. Reg. 170/03, a prescribed adverse drinking water test result or Adverse Water Quality Incident (AWQI) includes any exceedance of a prescribed Ontario Drinking Water Quality Standard, the presence of specified microbiological species that are not listed in the Ontario Drinking Water Quality Standard, exceedances of health-related parameters that are specified in a Certificate of Approval, municipal drinking water licence or order, or operational issues such as insufficient disinfection or high turbidity.

An AWQI indicates that a drinking water standard has been exceeded or a problem has arisen within a drinking water system. The report of an adverse event does not in itself indicate that drinking water is unsafe but rather that an incident has occurred and corrective actions must be

CHIEF'S *PERSPECTIVE*



Adverse water quality incidents are an important component of the drinking water safety net. In the event of an incident, (e.g., water main break, reduction in water pressure or exceedance of a standard) immediate actions, notifications and follow-up are required.

taken to ensure the protection of the public. For example, a low chlorine residual in the distribution system would require the owner to increase disinfection levels and ensure all treatment and monitoring equipment were properly functioning. In this case, drinking water quality may meet all Ontario Drinking Water Quality Standards; however action needs to be taken to ensure the situation does not deteriorate.

If the adverse result is identified at a laboratory, the laboratory must immediately notify the owner or operating authority of the system, the Ministry of the Environment's Spills Action Centre and the local Medical Officer of Health. When a drinking water system owner or operator is made aware of an adverse test result, they must also immediately notify the Ministry of the Environment's Spills Action Centre and the local Medical Officer of Health so that appropriate action can be taken.

O. Reg 170/03 provides specific corrective actions depending on the adverse event. Corrective action may include re-sampling, adjusting the system or treatment process, or notifying system users. The owner must also take any additional measures as directed by the local Medical Officer of Health, which could include issuing a Boil Water Notice or Advisory or a Drinking Water Notice or Advisory. The ministry continues to monitor the event to ensure all appropriate corrective actions are completed to resolve the issue.

Table 6 summarizes the number of AWQIs issued in 2008-09 by facility type.

Table 6: Summary of Adverse Water Quality Incidents by Drinking Water Facility Type for 2008-09

Facility Type	# of Systems with AWQIs	# of AWQIs	# of Results within AWQIs[1]	% Breakdown of AWQIs by Parameters			Other AWQIs[2]
				Microbiological	Chemical	Radiological	
Municipal Residential Drinking Water Systems[3]	452	1,769	1,974	26.7%	14.1%	0.2%[4]	59.0%
Non-Municipal Year-Round Residential Systems[3]	175	520	569	38.0%	7.9%	0.0%	54.1%
Systems Serving Designated Facilities	376	686	801	43.8%	22.2%	0.0%	34.0%

[1] A single AWQI may have multiple parameters and/or operational events.

[2] Some examples of other AWQIs are: high sodium, turbidity, low chlorine, high chlorine, low pressure, low ultraviolet voltage dosage, water main breaks and equipment failure.

[3] For municipal residential drinking water systems and non-municipal year-round residential drinking water systems, AWQIs for lead have not been considered for this analysis.

[4] These radiological test results were reported as AWQIs from a drinking water system that is no longer in operation.

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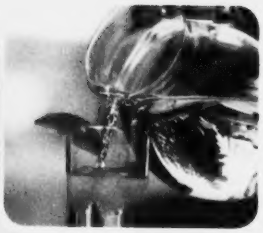
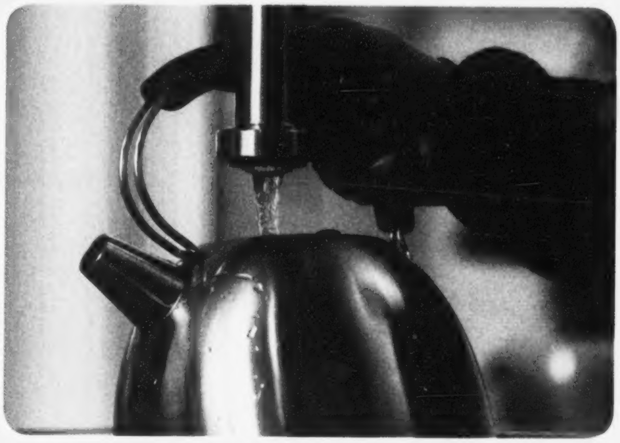


Know About the Different Types of Water Advisories

Boil water advisories and drinking water advisories are issued by the local Medical Officer of Health if there is a concern that drinking water may not be safe for public consumption. Advisories may be issued due to a known contaminant, or as a precaution due to potential or suspected contamination.

A boil water advisory instructs users to boil any water that may be used for purposes such as drinking or cooking. This type of advisory would be used when microbial contamination has been detected or as a proactive measure where it is suspected. A drinking water advisory is issued when boiling water is ineffective at removing or reducing the risk of a contaminant such as sodium.

The local Medical Officer of Health will issue advisories to the public through the media, by door-to-door notification or public posting of notices. If bacteria, such as *E.coli*, may have entered the water supply, communities will be advised to boil their water before consuming it. However, if chemical contaminants may be present in the drinking water supply and cannot be removed by boiling or disinfecting the water, a drinking water advisory will be issued. Consumers are advised to use an alternate water supply until further notice.



Advisories are issued using a risk-based approach, and will remain in place until corrective actions have been taken and the health unit is satisfied that the water does not pose a health risk. In most situations, system owners are able to quickly fix the issue, and the advisories are lifted within one to two weeks. In some cases, actions such as the design and installation of new treatment are required to resolve the issue and thus advisories may remain in effect for longer periods of time.

Any water advisory that remains in place for longer than 12 months is considered a long-term boil water or drinking water advisory. Long-term advisories typically require significant corrective actions, such as conducting pilot projects, or the installation or upgrading of the water treatment plant to resolve the issues. A Medical Officer of Health will only lift the advisory if they are satisfied that all corrective actions have been taken and that the situation has been remedied.

As of March 31, 2009, a total of five municipal residential drinking water systems had a long-term boil water advisory or drinking water advisory. Three of those systems were included in the 2007-08 report, and one of them has since had its boil water advisory lifted. Both systems that were added to the list in 2008-09, have since had their boil water advisories lifted following the installation of new drinking water treatment plants. The ministry continues to work with drinking water system owners to ensure that they take appropriate corrective actions when needed. This may include additional upgrades to an existing plant or the installation of a new treatment system.

Lead Action Plan Drinking Water Results

Corrosion in pipes occurs when water wears away their inner surface. If the pipe's inner surface contains lead, corrosion can cause lead to enter the drinking water system.

Tap water sample collection.

The government has taken strong action to protect Ontario citizens from exposure to lead in drinking water. By implementing and monitoring the province's Lead Action Plan, the ministry and its partners are making an important contribution to the protection of drinking water. The ministry continues to support local efforts to address lead issues in drinking water.

Some key components of the province's Lead Action Plan that are further explained in the "At the Tap" section of this report are:

- The Community Lead Testing Program (applicable to municipal and non-municipal year-round residential systems)
- Corrosion control (applicable to only large municipal residential drinking water systems)
- Lead testing for private and public schools and day nurseries.

Community Lead Testing Program Results

The Community Lead Testing Program requires owners and operators of residential drinking water systems to sample for lead each year during the following periods:

- Cold water/winter sampling: December 15 to April 15
- Warm water/summer sampling: June 15 to October 15.

Two types of sampling are required: samples from plumbing (from taps in homes and businesses), and samples from the distribution system (from the distribution pipes of drinking water systems, often accessed at fire hydrants or dedicated sampling stations).

The results for Round 1 testing, which took place from December 15, 2007 to April 15, 2008, were reported in the 2007-2008 Chief Drinking Water Inspector Annual Report. For more information, visit **www.ontario.ca/drinkingwater/274396.pdf**.

The test results for both Rounds 2 and 3 were very encouraging. Round 2 lead testing occurred from June 15, 2008 to October 15, 2008. Those tests found that 96.9 per cent of all systems that reported plumbing results and 98.7 per cent of systems that reported distribution results met the provincial standard. Round 3 testing took place between December 15, 2008 and April

15, 2009. In that round, 97.9 per cent of all systems that reported plumbing results and 98.3 per cent of systems that reported distribution results met the provincial standard. Generally, results from both rounds of testing were well within the maximum allowable concentration of 10 µg/L (micrograms per litre), as shown in **Table 7**.

Table 7: Drinking Water Plumbing and Distribution Lead Results by Facility Type for Round 2 and Round 3

Comparison of Drinking Water Quality		Round 2 (June 2008-October 2008)		Round 3 (December 2008-April 2009)	
		Plumbing	Distribution	Plumbing	Distribution
Municipal Residential Drinking Water Systems	**# of Samples**	34,951	4,870	24,994	3,749
	Average Concentration of Lead (µg/L)	1.87	1.36	1.74	1.74
	Percentage of Samples that met the Standard	96.8%	98.9%	97.8%	98.4%
Non-Municipal Year-Round Residential Systems	**# of Samples**	2,944	284	1,447[1]	159
	Average Concentration of Lead (µg/L)	1.79	2.7	1.27	4.53
	Percentage of Samples that met the Standard	98.0%	95.8%	98.8%	95.6%
Total	**# of Samples**	37,895	5,154	26,441	3,908
	Average Concentration of Lead (µg/L)	1.86	1.44	1.72	1.85
	Percentage of Samples that met the Standard	96.9%	98.7%	97.9%	98.3%

[1] Number of samples decreased in Round 3, as sampling requirements for some systems have decreased since these systems have been granted regulatory relief, or have demonstrated, through drinking water testing, that there is no issue with lead.

Corrosion Control

Corrosion control planning may be required for municipal residential systems that provide drinking water to residential developments with more than 100 private residences. According to O. Reg. 170/03, these systems must submit a corrosion control plan to the ministry if:

- More than 10 per cent of all plumbing locations reported lead amounts greater than 10 µg/L in two out of the three most recent sampling rounds and
- At least two plumbing locations reported lead amounts of greater than 10 µg/L in each round.

The corrosion control plan must include an analysis of the potential source(s) of lead within the system and the measure(s) the drinking water system owner will take to reduce lead within the system. This plan must be submitted to the ministry within one year from the end of the second sampling period in which the results reflect both of the criteria listed above. Eighteen systems are currently preparing corrosion control plans. Additional systems may be required to prepare a corrosion control plan based on future sampling rounds.

Lead Testing Results for Public/Private Schools and Day Nurseries from May to October 2008

Under O. Reg. 243/07, schools and day nurseries are required to take two types of drinking water samples when testing for lead:

- **Standing** — after the plumbing has not been used for at least six hours
- **Flushed** — after the water has been running or flushing for five minutes, followed by a 30-35 minute waiting period.

In 2008-09, the ministry performed lead inspections at public and private schools as well as day nurseries. The number of violations from 2007-08 decreased and drinking water quality results for lead across the province showed improvement. The sampling compliance rate also increased to 70 per cent for private schools.

Sample results taken and analysed from May to October 2008 reveal that 85.9 per cent of all standing samples and 94.8 per cent of all flushed samples were below the maximum allowable concentration of 10 µg/L (see **Charts 9** and **10**). These encouraging results indicate that flushing is an effective way to decrease lead in drinking water. Results indicated that 88.4 per cent of all schools and day nurseries that provided standing samples and 96.4 per cent of those that reported flushed samples showed no exceedances. This indicates the majority of facilities are meeting the Ontario Drinking Water Quality Standard for lead.

Chart 9: Results from Public/Private Schools and Day Nurseries Submitting Standing Samples in 2008

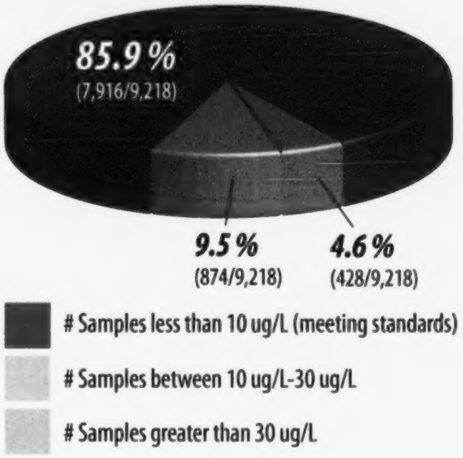
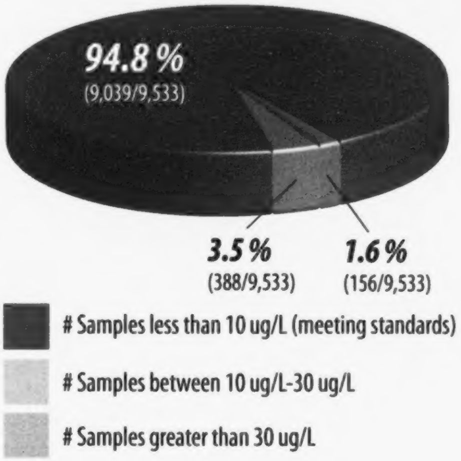


Chart 10: Results from Public/Private Schools and Day Nurseries Submitting Flushed Samples in 2008



2008-09 Drinking Water Systems Inspection Program Report

This section provides performance results from the ministry's inspection program in 2008-09 for drinking water systems and licensed laboratories, as well as data on operator certification and conviction summary by facility type.

The ministry's rigorous inspection program is another important component of Ontario's drinking water safety net. The annual inspections of all municipal residential drinking water systems help the ministry determine how well the systems are operating.

The inspection protocol for municipal residential drinking water systems consists of a series of regulatory questions to determine how well they are complying with the province's strict regulations. In addition, the ministry's comprehensive risk-based inspection rating process allows inspection results to be quantified.

Under the Compliance and Enforcement Regulation (O. Reg. 242/05), one out of every three inspections of a municipal residential drinking water system must be unannounced. The ministry is also required to submit an inspection report to municipal residential drinking water system owners or operating authorities within 45 days of the inspection. For more information on meeting the requirements of the compliance and enforcement regulation, see **Drinking Water Facts** in this section.

Municipal Residential Drinking Water Systems' Inspection Program Results

In the past four years, inspection results for municipal residential drinking water systems have shown continuous improvement with very good overall performance ratings, as shown in **Chart 11**. Through inspectors' ongoing efforts and through continuous outreach and education, the system owners and operators are more aware of their regulatory requirements. Whenever ministry inspectors identify non-compliance issues, they work with municipal system owners and operators to help address them.

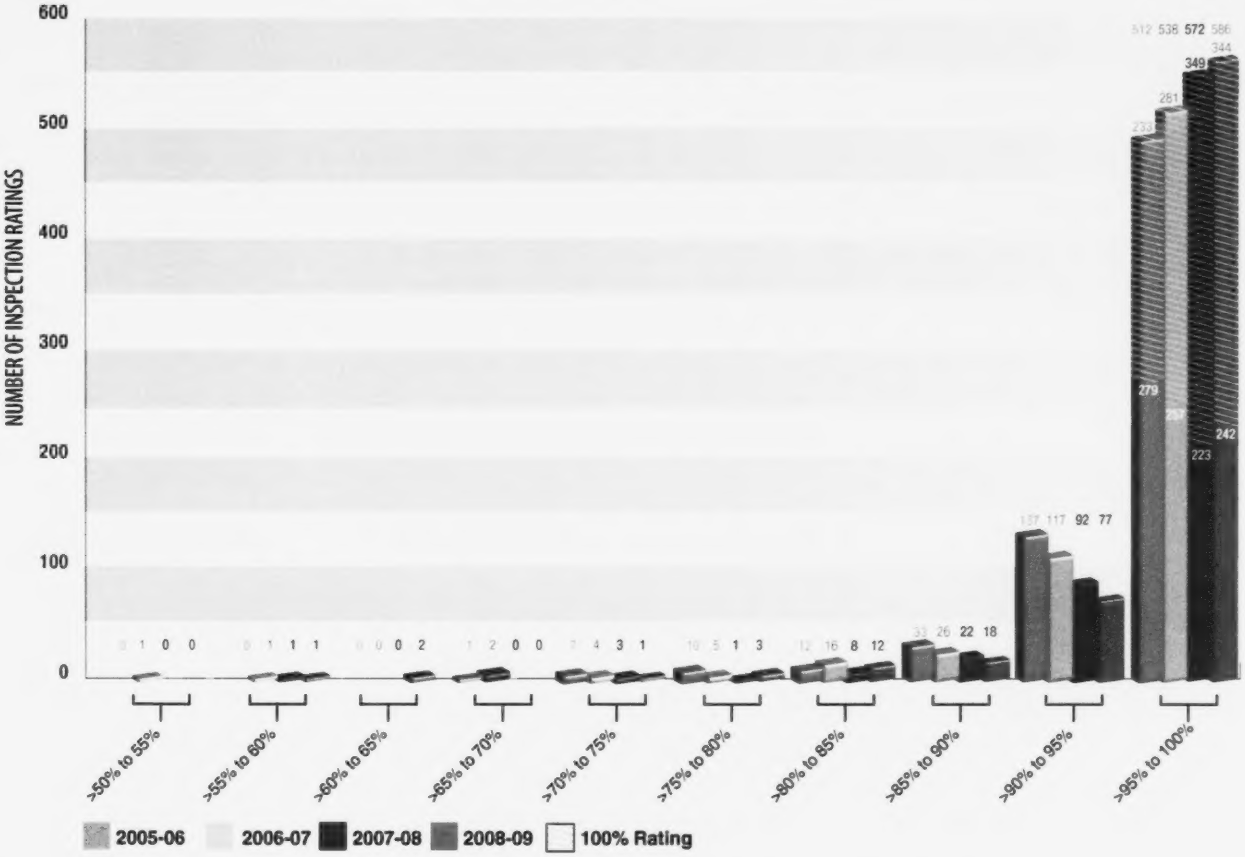
The Chief Drinking Water Inspector at a plant with Ontario drinking water inspectors and a plant operator.

In 2008-09, all 700 municipal residential drinking water systems were inspected, generating a total of 700 inspection ratings. Of these:

- 49 per cent of inspection ratings achieved 100 per cent, which means inspectors found no areas of non-compliance. This result is consistent with the 2007-08 rating data
- 84 per cent of inspection ratings were greater than 95 per cent, which is an increase from 82 per cent in 2007-08 and 76 per cent in 2006-07
- 95 per cent of inspection ratings were higher than 90 per cent.

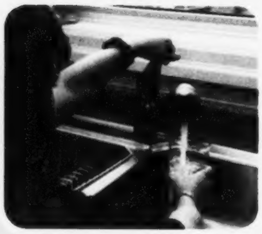
When comparing the 2008-09 and 2007-08 inspection rating results, 36 per cent of the ratings improved; 30 per cent of the ratings remained the same; and 34 per cent received lower ratings. Whenever ministry inspectors find non-compliance issues, they use a range of compliance tools to help municipal system owners and operators resolve the compliance issues effectively.

Chart 11: Distribution of Municipal Residential Drinking Water System Inspection Ratings in 2005-06, 2006-07, 2007-08 and 2008-09



For a list of municipal residential drinking water systems in Ontario, their locations, 2008-09 inspection ratings and the percentage of their drinking water quality tests that met the provincial standards, please see **Appendix 1**.

CHIEF'S *PERSPECTIVE*



It is critical to assess ongoing trends in regulated community compliance in order to identify key compliance issues, ensure effective regulatory oversight and to determine necessary education and compliance assistance needs.

Top Areas for Improvement — Municipal Residential Drinking Water Systems

The ministry analyzes the inspection program results to identify trends in non-compliance and any issues that require a special focus. During 2008-09, the following areas needing improvement were identified:

Treatment Equipment Operation

When treatment equipment is not operating as it should, the causes can include power interruptions, equipment changeover or filter performance. The ministry is reviewing the criteria for filter performance and will share any findings with stakeholders.

Operations and Maintenance Manual Compliance

Operations and maintenance manuals contain information relating to the documentation of procedures for drinking water systems. Most of the issues related to the manuals stem from insufficient records on procedures that include monitoring, sampling and reporting schedules. More than 25 per cent of the issues identified in 2008-09 were linked to significant changes that the system was undergoing, such as the installation of new equipment or changes in the operating authority of the system that had not yet been reflected in the manuals.

Chlorination Equipment Operation

Approximately five per cent of municipal residential drinking water systems had difficulty maintaining chlorine residuals in their distribution system. This resulted from low demand, piping dead-ends or monitoring equipment malfunctions.

Re-Classification of Systems and Sub-systems

When drinking water systems undergo construction and install new equipment, they are required to register their upgraded system with the ministry since this often changes how they are classified. In addition, in 2008-09, various systems were amalgamated to form larger systems and as a result, they too needed to be reclassified.

DRINKING WATER *FACTS*

Ensuring Accountability — Meeting the Requirements of the Compliance and Enforcement Regulation

During 2008-09, the Ministry of the Environment fulfilled its responsibilities under the Compliance and Enforcement Regulation (O. Reg. 242/05) with respect to inspecting municipal residential drinking water systems and laboratories licensed to perform drinking water testing.

Municipal Residential Drinking Water Systems

Actions included:

- Inspecting all 700 municipal residential drinking water systems in the province
- Ensuring that at least one out of every three inspections of a municipal residential drinking water system is unannounced (in 2008-09, 283 of the 700 inspections were unannounced)
- Sending inspection reports to appropriate authorities within 45 days of completing the inspection
- Responding as required to adverse water quality test reports or other reported problems
- Taking mandatory action within 14 days of finding a deficiency at a municipal residential drinking water system (or taking immediate action in cases where a drinking water health hazard was present).

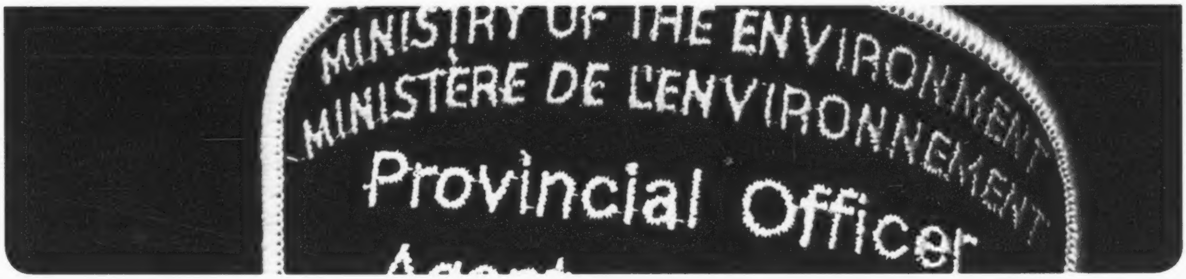
Laboratories Licensed to Perform Drinking Water Testing

Actions included:

- Inspecting all 52 licensed laboratories
- Completing 117 inspections at licensed laboratories and two inspections at unlicensed laboratories, including 52 unannounced laboratory inspections, 52 announced inspections and 13 responsive inspections (regulations require at least one out of every two inspections to be unannounced)
- Providing all laboratories with an inspection report within 45 days of the completion of the inspection
- Taking mandatory action within 14 days of finding an infraction at a licensed laboratory (or taking immediate action in cases where a drinking water health hazard was present).

Request for Drinking Water Investigation

The Compliance and Enforcement Regulation enables any member of the public to request an investigation if they have reason to believe that the Safe Drinking Water Act, its regulations or instruments are being violated. There were no such requests from the public in 2008-09.



These circumstances contributed to the re-classification issues that were identified during the year.

The ministry continuously works with its partners to help address areas where improvements can be made. Drinking water system operator training programs are also adjusted to help address non-compliance areas. In addition, municipal residential drinking water system owners and operators across the province continue to work towards achieving 100 per cent compliance in all aspects of their operations.

Municipal Residential Drinking Water Systems — Deficiencies, Orders and Orders Resolutions

Deficiencies

A deficiency is defined as a violation of specified provisions of Section 18 of the Safe Drinking Water Act, or certain provisions of its regulations if the violation is deemed to pose a drinking water health hazard. The ministry is required to take action within 14 days of discovering a deficiency at a municipal residential drinking water system. An example of a deficiency would be water treatment and disinfection equipment that is not operating according to provincial standards.

Only one system was found to have a deficiency in 2008-09, down from four deficiencies identified in 2007-08.

Orders and Order Resolution

The 700 inspections in 2008-09 led to 21 orders being issued to 18 municipal residential drinking water systems, or 2.6 per cent of the total, as shown in **Table 8**. In addition, four non-inspection orders were also issued. Of these 25 orders, 19 were issued as a result of a contravention of provincial requirements and six were preventative orders. See **Appendix 2-A** and **2-B** for details on preventative and contravention orders

Table 8: Municipal Residential Drinking Water Systems that Received Inspection-Related Orders in 2008-09, 2007-08, 2006-07, 2005-06 and 2004-05

	2008-09	2007-08	2006-07	2005-06	2004-05
Total number of Municipal Residential Drinking Water Systems with orders	18[1]	11	20[2]	43[3]	77
Total number of inspections of Municipal Residential Drinking Water Systems	700	699	712	709	729
Percentage of Municipal Residential Drinking Water Systems that were inspected and received orders	2.6%	1.6%	2.8%	6.1%	10.6%

[1] Three Municipal Residential Drinking Water Systems were issued preventative orders during an inspection.

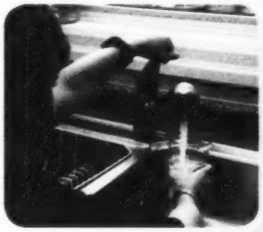
[2] Four Municipal Residential Drinking Water Systems were issued preventative orders.

[3] 12 Municipal Residential Drinking Water Systems were issued preventative orders.

An Ontario drinking water inspector and a drinking water plant operator during a plant inspection.

issued as a result of an inspection or an incident.

The ministry has been tracking system performance for the past five years, including the issuance of orders and how they are being resolved. Out of the 25 orders issued in 2008-09, 20 systems have complied with the order requirements, while five systems continue to work toward compliance. Three systems that were working toward compliance in 2007-08 have now met order requirements.



CHIEF'S *PERSPECTIVE*

Regular inspections and, when necessary, the issuing of provincial officer orders continue to be important tools for addressing non-compliance situations. The relatively low number of orders issued, however, speaks to both the vigilance of inspectors and the dedication and effectiveness of regulated drinking water system owners and operators.

Inspection Program Results for Local Services Boards

Some northern Ontario communities are managed by local services boards. The drinking water systems these boards operate are categorized as non-municipal year-round residential drinking water systems because they are not owned and operated by a municipality.

During 2008-09, the ministry performed nine inspections of drinking water systems operated by local services boards and no orders were issued. In comparison, three orders were issued to three systems in 2007-08.

One local services board owner who received orders in 2005-06 and 2006-07 continues to work with the ministry to determine the most appropriate water disinfection equipment to install to meet all disinfection requirements. The local services board received approval for funding, under the Building Canada Fund in February 2009, to install this equipment.

Non-Municipal Year-Round Residential Drinking Water Systems and Systems Serving Designated Facilities Inspection Program Results

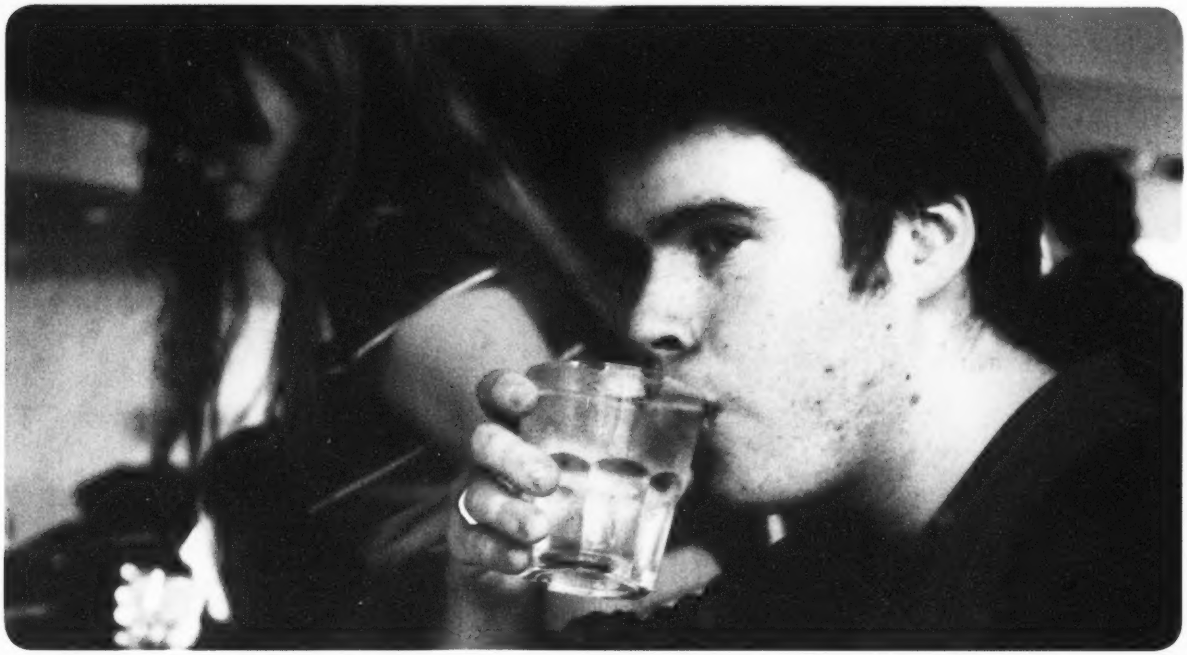
The ministry has been conducting proactive risk-based inspections of non-municipal year-round residential drinking water systems and systems serving designated facilities. When determining which systems to inspect, the ministry considers several factors, such as the history of compliance and adverse water quality incidents, or referrals from local public health units.

After inspections, inspectors determine which regulatory compliance areas need attention so that these drinking water systems can continuously improve. The ministry works with owners and operators of non-municipal year-round residential drinking water systems as well as those serving designated facilities to help them achieve compliance requirements. Ongoing collaborative work between the ministry and its drinking water partners is a part of our multifaceted compliance improvement toolkit and an important component of Ontario's drinking water safety net.

In 2008-09, there were 259 proactive inspections of these systems, up from 196 in 2007-08. A total of 36 orders were issued to 35 systems; 26 of them were issued to 25 non-municipal year-round residential drinking water systems, while another 10 were issued to 10 systems serving designated facilities.

Inspection Program Results for Schools and Day Nurseries

In 2008-09, 1,009 out of 10,679 (9.5 per cent) regulated day nurseries and private and public schools were inspected. During these inspections, five orders were issued, representing 0.5 per cent of inspected facilities. Three of those drinking water facilities have complied with the order requirements, while two are working toward compliance.



2008-09 Licensed Laboratories Inspection Program Results

Another key component of Ontario's drinking water safety net is the inspection of licensed laboratories. All laboratories that are licensed to test drinking water must be inspected to ensure they are operating in compliance with provincial regulations. Inspections may include an assessment of several areas such as: sample handling, testing methods, reporting of adverse water quality incidents, accreditation requirements, management practices, facilities and resources.

A laboratory technician working at a licensed laboratory.

The Licensed Laboratories Inspection Program involves three types of inspections: announced, unannounced and responsive. Responsive inspections are also unannounced and are conducted after a complaint or concern is raised by a ministry staff member or an external source. Laboratories are inspected twice annually with at least one of the required inspections being unannounced.

The ministry is required to provide the laboratory with a report within 45 days of the inspection. The report identifies problem areas and non-compliance issues, and provides guidance on how to address these areas and issues. In turn, laboratories must take action within 14 days of receiving their reports if the inspector identified a regulatory infraction. If the infraction represents a drinking water health hazard, mandatory action must be taken immediately. In 2008-09, the ministry fulfilled these regulatory responsibilities.

Inspections and Orders

In 2008-09, all 52 licensed laboratories were inspected at least twice, for a total of 117 inspections. Of these, 52 were announced, 52 were unannounced and 13 were responsive inspections. In addition, two inspections were conducted at non-licensed laboratories.

Table 9 provides a summary of the laboratory inspections completed over the past five years, broken down by the type of inspection.

In 2008-09, two orders were issued to two laboratories licensed to perform drinking water testing, which represents 1.9 per cent of all laboratories, as shown in **Table 10**. See **Appendix 2-C-1** for order details.

An additional order was issued during an announced resolution inspection to a non-licensed laboratory. However, a review of the requested documentation concluded that the unlicensed laboratory was not in fact analysing drinking water samples. See **Appendix 2-C-2** for order details.

Table 9: Summary of Laboratory Inspections in 2008-09, 2007-08, 2006-07, 2005-06, 2004-05

Inspection Type	Inspections Completed				
	2008-09	2007-08	2006-07	2005-06	2004-05
Announced	52	56	59	1	57
Unannounced	52	53[2]	57	113	60
Announced (issue resolution[1])	2	2	-	5	5
Responsive	13	5	10	15	14
Total	119	116	126	134	136
Number of Licensed Laboratories	52	56	57	57	57

[1] Inspections were performed at unlicensed testing facilities.

[2] During 2007-08, three laboratories voluntarily withdrew from the licensing program between their announced and unannounced inspections.

Table 10 : Licensed Laboratories that Received Inspection-Related Orders in 2008-09

	2008-09
Number of licensed laboratories that received orders	2
Number of proactive inspections of licensed laboratories	104
Percentage of licensed laboratories that were inspected and received orders	1.9%

Top Areas for Improvement — Licensed Laboratories

The ministry's Licensed Laboratory Inspection Program results identified the following four common improvement areas for laboratories to consider:

- Develop a policy relating to the completion of the mandatory Chain of Custody forms (which track possession, transfer and custody of drinking water samples) by the client before submitting drinking water samples for lead analysis
- Develop a policy relating to the clear identification of drinking water samples when they are submitted to the licensed laboratory for analysis
- Retain drinking water samples until results are reported
- Maintain records to demonstrate that drinking water samples were preserved before analysis.

Operator Certification Data

Ontario's certification and training requirements for operators are among the most stringent in North America. Certification and training is a key component of Ontario's drinking water safety net.

Operators must complete the required training at the start of their careers. Depending on the type of certificate they hold and the type of system they work in, they must also complete additional training each year. As of March 31, 2009, there were 5,946 certified drinking water operators in Ontario holding 7,978 certificates. **Table 11** lists the number of certificates held by certified operators in Ontario.

A large number of operators will be eligible to retire over the next five to 10 years. With this in mind, the ministry is working with its partners to help promote careers in the water and wastewater industry. Some of the ministry's initiatives in this area include:

- Developing tools and outreach materials aimed at raising awareness among young people about career options in water and wastewater operations, including a website, videos, and promotional material such as bookmarks and brochures for high school guidance counselors
- Developing a clear career path for college students interested in working in the water and wastewater industry by signing agreements with community colleges to incorporate the Entry-level Drinking Water Operator mandatory course into their environmental programs.

Table 11: Numbers of Certificates for Certified Operators Issued (as of March 31, 2009)

System Type	OIT[1]	Class 1[2]	Class 2[2]	Class 3[2]	Class4[2]	Total		
						2008-09	2007-08	2006-07
Water Treatment: system collects, produces, treats and distributes drinking water	929	827	642	379	368	3,145	3,342	3,867
Water Distribution (includes Water Distribution and Supply): system distributes water only or distributes and treats water only by disinfection	1,168	1,208	1,473	465	236	4,550	4,644	5,143
Limited Surface/Ground Water[3]						283	287	254
Total Certificates						7,978	8,273	9,264

[1] Operator-in-training certificate.

[2] Drinking water systems are classified on a scale of 1 to 4 based on operational complexity and population served. Correspondingly, operators are certified from Class 1 to 4 based on education, training, an examination and experience.

[3] A Limited System certificate is the minimum requirement for operating the following categories of systems: small municipal residential (groundwater), non-municipal year-round residential, large non-municipal non-residential serving a designated facility and large municipal non-residential serving a designated facility.

Small Drinking Water Systems Program Results

Program and Technical Training

A comprehensive training program was developed and implemented during 2008 and 2009 for the transfer of legislative oversight for small drinking water systems from the Ministry of the Environment to the Ministry of Health and Long-Term Care and local boards of health. The training program was targeted to public health inspectors employed by local boards of health responsible for conducting risk assessments and issuing site specific directives of the small drinking water systems under the new regulations.

Program Training: As of March 30, 2009, 219 inspectors attended the two-day program training sessions that included information on new regulations, identifying and applying a site specific approach to small drinking water systems, issuing directives and using the Ministry of Health and Long-Term Care's information systems.

Technical Training: As of March 30, 2009, three-day technical training sessions were held with 324 public health inspectors and program managers and provided information on small drinking water system operation, drinking water treatment and distribution, source water and performance of a risk assessment of an operating drinking water system.

Reporting of Adverse Water Quality Incidents (AWQIs)

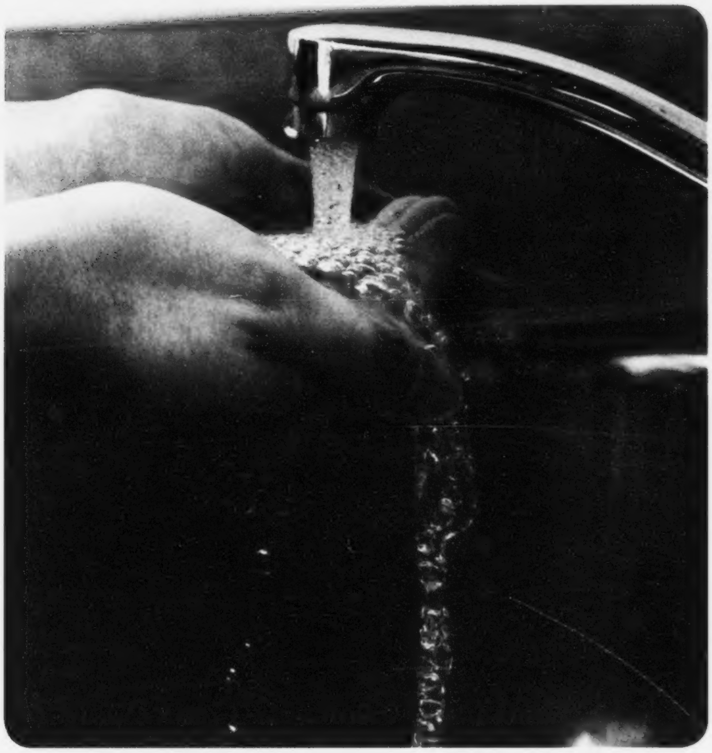
Between December 1, 2008 and March 31, 2009, there were 119 adverse water quality incidents reported to the Ministry of Health and Long-term Care and to the local boards of health under O. Reg. 318/08 and O. Reg. 319/08.

Note: The regulations for Small Drinking Water Systems (O. Reg. 318/08 and O. Reg. 319/08 under the Health Protection and Promotion Act) came into force on December 1, 2008.

A drinking water system inspection training session.

2008-09 Convictions

In addition to working with its drinking water partners to overcome areas of non-compliance, the province takes corrective action in response to potential violations. Those who are responsible for delivering safe drinking water to the public are legally accountable for their actions. This is another key component of Ontario's drinking water safety net.



Inspectors report potentially serious violations of Ontario's environmental protection laws, including the Safe Drinking Water Act, to the ministry's Investigations and Enforcement Branch (IEB). When necessary, the IEB conducts investigations and recommends whether or not to lay charges. If laying charges is recommended, a Crown Attorney reviews the evidence, assesses the benefits to the public of conducting a prosecution, evaluates the likelihood of securing a conviction and decides if charges will be laid.

During 2008-09, there were 13 cases involving convictions related to 14 drinking water systems. The cases with convictions resulted in fines totalling $131,800, as shown in **Table 12**. For additional details on convictions, see **Appendix 3**.

Table 12: Summary of 2008-09 Convictions for Drinking Water Prosecutions by Facility Type

Facility Type	2008-09 Total Cases with Convictions	Number of Systems or Laboratories	2008-09 Fines
Municipal Residential Drinking Water Systems[1]	3	4	$42,000
Non-Municipal Year-Round Residential Systems	6	6	$39,000
Systems Serving Designated Facilities	4	4	$50,800
Licensed Laboratories	-	-	-
Total	13	14	$131,800

[1] Two of the Municipal Residential Drinking Water System cases with convictions were fined a total of $42,000, while the third case involved an individual who was not fined.

Closing Statement

The upcoming year will be an important one as we move forward on important initiatives that further advance the safety net. Source protection committees will be submitting assessment reports and will be initiating source protection plans. We also expect that a significant number of municipalities will become fully licensed over the next year. In addition, the ministry will continue to monitor drinking water systems, to ensure they comply with Ontario's stringent regulatory requirements.

The greatest strength of our provincial safety net continues to be dedicated people and communities working together to safeguard Ontario's drinking water. The Ministry of the Environment and partner ministries, municipalities, private system owners and operators, the Walkerton Clean Water Centre, local Public Health Units, licensed laboratories, academic institutions, non-governmental organizations and the public at large all play a critical role and I can assure you that we will continue to work together to ensure Ontario's drinking water is of the highest quality.

Please let us know what you think of this report as well as any ideas you might have for future editions. You can reach my office by email at **drinking.water@ontario.ca.**

Glossary

C

Chain of Custody Form:	a mandated document requiring completion by both drinking water system owners and licensed laboratories, under the Safe Drinking Water Act. This form accompanies the drinking water sample providing an accurate written record used to trace the possession, transfer and custody of a sample from the time of its collection to submission at the laboratory through testing and result reporting to sample disposal.
Chlorine Residual:	the concentration of chlorine remaining in the chlorinated water at the end of a given contact time that is available to continue to disinfect. Measured as Free Chlorine, Combined Chlorine and Total Chlorine.
Contravention Order:	the purpose of a Contravention Provincial Officers Order is to address a contravention of an Act, Regulation, order, notice, direction, requirement or report or a term or condition of an approval/permit. Contravention orders can be issued to persons who are either currently contravening or have in the past contravened an Act, Regulation, order, notice, direction, requirement or report or a term or condition of an approval/permit. A contravention order may require the ordered party to comply with any directions set out in the order within the time specified.
Contaminant:	any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that causes or may cause an adverse effect.
Corrective Action:	steps that must be taken following an adverse water quality incident as specified by O. Reg. 170/03, Schedules 17 & 18, directed by the local medical officer of health or drinking water inspector, that are necessary to protect human health.

D

Disinfection:	the destruction or inactivation of pathogenic and other kinds of microorganisms by physical or chemical means.

E

***E. coli* (*Escherichia coli*):**	a species of bacteria naturally present in the intestines of humans and animals. If animal or human waste containing *E. coli* contaminates drinking water it may cause gastrointestinal disease in humans. Most types of *E. coli* are harmless, but some active strains, especially O157:H7, produce harmful toxins and can cause severe illness.
Exceedance:	violation of a limit for a contaminant as prescribed in the Ontario Drinking Water Quality Standards regulation (O. Reg. 169/03).

F	
Filtration:	the separation of suspended solid particles from a fluid stream by passage of the fluid through a granular or membrane filter medium that retains most of the solids on or within itself.
M	
Microbiological Organism:	an organism so small that it cannot be seen without a microscope, including bacteria, protozoa, fungi, viruses and algae.
O	
Organism:	an individual form of life that includes bacteria, protozoa, fungi, viruses and algae.
P	
Preventative Order:	the purpose of a Preventative Measures Provincial Officers Order is to address an environmental concern where the person may not have actually contravened any of the applicable environmental legislation. A Preventative Measures order is used to prevent possible future adverse effects from happening.
S	
Source Water:	untreated water in streams, rivers, lakes or underground aquifers which is used for the supply of raw water for drinking water systems.
T	
Total Coliform Bacteria:	a group of waterborne bacteria consisting of three main groups with common characteristics that is used as an indicator of water quality. The presence of total coliform bacteria in water leaving a treatment plant or in any treated water immediately after treatment could indicate inadequate treatment and possible water contamination.
Turbidity:	a visible haze or cloudiness in water caused by the presence of suspended matter, resulting in the scattering and absorption of light. The cloudier the water, the greater the turbidity.
W	
Watershed:	a region or area bounded peripherally by a divide and draining ultimately to a particular watercourse or body of water.

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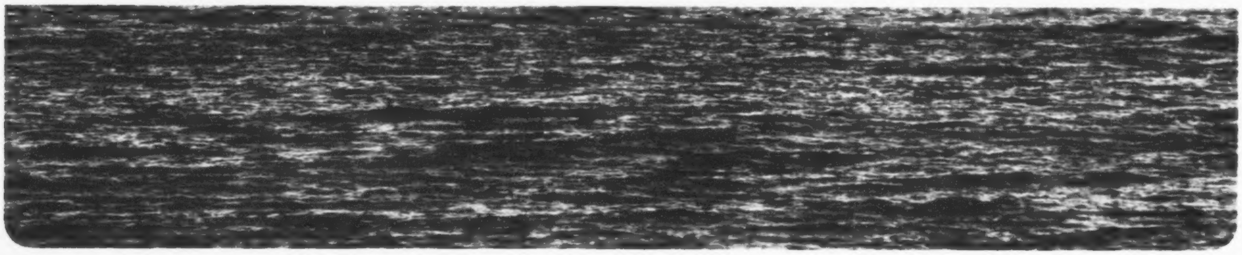

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Adjala-Tosorontio, Township of	Colgan Well Supply	100.00%	100.00%
Adjala-Tosorontio, Township of	Everett Well Supply	100.00%	99.71%
Adjala-Tosorontio, Township of	Hockley Well Supply	100.00%	100.00%
Adjala-Tosorontio, Township of	Lisle Well Supply	100.00%	100.00%
Adjala-Tosorontio, Township of	Loretto Heights Well Supply	100.00%	100.00%
Adjala-Tosorontio, Township of	Rosemont Well Supply	100.00%	99.69%
Adjala-Tosorontio, Township of	Weca Well Supply	100.00%	100.00%
Ajax, Town of	Ajax Water Treatment Plant	100.00%	99.89%
Alfred and Plantagenet, Township of	Lefaivre Water Treatment Plant	100.00%	100.00%
Alfred and Plantagenet, Township of	Plantagenet Water Treatment Plant	100.00%	100.00%
Alfred and Plantagenet, Township of	Wendover Water Treatment Plant	100.00%	99.80%
Alnwick/Haldimand, Township of	Grafton Well Supply	100.00%	100.00%
Amaranth, Township of	Waldemar Well Supply	98.57%	99.43%
Amherstburg, Town of	Amherstburg Water Treatment Plant	95.66%	100.00%
Armstrong, Township of	Earlton Well Supply	100.00%	100.00%
Arnprior, Town of	Arnprior Water Treatment Plant	94.99%	100.00%
Arran-Elderslie, Municipality of	Arran-Elderslie Well Supply	100.00%	99.32%
Arran-Elderslie, Municipality of	Tara Well Supply	100.00%	100.00%
Ashfield-Colborne-Wawanosh, Township of	Benmiller Inn Well Supply	97.49%	98.59%
Ashfield-Colborne-Wawanosh, Township of	Century Heights Subdivision Well Supply	96.93%	100.00%
Ashfield-Colborne-Wawanosh, Township of	Courtney Subdivision Distribution System	99.30%	100.00%
Ashfield-Colborne-Wawanosh, Township of	Dungannon Well Supply	96.15%	99.71%
Ashfield-Colborne-Wawanosh, Township of	Huron Sands Well Supply	99.51%	100.00%
Ashfield-Colborne-Wawanosh, Township of	Maitlandview Estates Well Supply	100.00%	N/A*
Ashfield-Colborne-Wawanosh, Township of	South Lucknow Distribution System	100.00%	100.00%
Asphodel-Norwood, Township of	Norwood Well Supply	100.00%	100.00%
Asphodel-Norwood, Township of	Trentview Estates Development Distribution System	94.30%	100.00%
Assiginack, Township of	Assiginack Water Treatment Plant	96.09%	100.00%
Assiginack, Township of	Sunsite Estates Subdivision Water Treatment Plant	90.26%	100.00%
Atikokan, Township of	Atikokan Water Treatment Plant	87.43%	100.00%
Aurora, Town of	Aurora Distribution System	100.00%	99.77%
Aurora, Town of	Aurora Well Supply	100.00%	99.93%
Aylmer, Town of	Aylmer (Elgin Area Water Supply) Distribution System	100.00%	99.82%
Aylmer, Town of	Aylmer Secondary Distribution System	100.00%	100.00%
Bancroft, Town of	Bancroft Water Treatment Plant	95.20%	99.90%
Barrie, City of	Barrie Well Supply	96.62%	99.82%

* Drinking water quality data is not available for three systems that have been officially unregistered. One system amalgamated in the previous fiscal year and two systems ceased operation.

APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Bayham, Municipality of	Bayham (Elgin Area Water Supply) Distribution System	100.00%	100.00%
Belleville, City of	Belleville Water Treatment Plant	96.15%	99.94%
Belleville, City of	Point Anne Hamlet Water Treatment Plant	100.00%	100.00%
Billings, Township of	Kagawong Water Treatment Plant	96.18%	100.00%
Black River-Matheson, Township of	Holtyre Well Supply	93.83%	100.00%
Black River-Matheson, Township of	Matheson Well Supply	98.53%	99.74%
Black River-Matheson, Township of	Ramore (Playfair) Well Supply	97.01%	98.75%
Black River-Matheson, Township of	Val Gagne Well Supply	100.00%	98.68%
Blandford-Blenheim, Township of	Bright Well Supply	100.00%	100.00%
Blandford-Blenheim, Township of	Drumbo Well Supply	98.56%	99.71%
Blandford-Blenheim, Township of	Plattsville Well Supply	100.00%	100.00%
Blandford-Blenheim, Township of	Princeton Countryside Manor Cistern System	98.63%	100.00%
Blind River, Town of	Blind River Well Supply	90.28%	98.91%
Bluewater, Municipality of	Bluewater Distribution System	100.00%	99.15%
Bluewater, Municipality of	Carriage Lane Well Supply	100.00%	100.00%
Bluewater, Municipality of	Harbour Lights Development Well Supply	100.00%	100.00%
Bluewater, Municipality of	Hensall Well Supply	98.49%	100.00%
Bluewater, Municipality of	Zurich Well Supply	91.16%	100.00%
Bonnechere Valley, Township of	Eganville Water Treatment Plant	94.47%	99.81%
Bracebridge, Town of	Bracebridge (Kirby Beach) Water Treatment Plant	96.62%	100.00%
Bradford West Gwillimbury, Town of	Bradford/Bondhead Well Supply	100.00%	99.82%
Brant, County of	Airport Well Supply	100.00%	100.00%
Brant, County of	Cainsville Distribution System	100.00%	100.00%
Brant, County of	King George Road Distribution System	98.14%	100.00%
Brant, County of	Mount Pleasant Well Supply	97.17%	100.00%
Brant, County of	Paris Well Supply	95.50%	100.00%
Brant, County of	St. George Well Supply	98.48%	100.00%
Brantford, City of	Brantford (Holmedale) Water Treatment Plant	96.82%	99.77%
Brighton, Municipality of	Brighton Well Supply	100.00%	100.00%
Brock, Township of	Beaverton Water Treatment Plant	100.00%	100.00%
Brock, Township of	Cannington Well Supply	100.00%	99.95%
Brock, Township of	Sunderland Well Supply	100.00%	99.63%
Brockton, Municipality of	Hanover Water Treatment Plant	95.51%	100.00%
Brockton, Municipality of	Lake Rosalind Well Supply	98.53%	100.00%
Brockton, Municipality of	Powers Subdivision Well Supply	100.00%	98.39%
Brockton, Municipality of	Walkerton Well Supply	100.00%	98.90%

* Drinking water quality data is not available for three systems that have been officially unregistered. One system amalgamated in the previous fiscal year and two systems ceased operation.

APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Brockville, City of	Brockville Water Treatment Plant	100.00%	99.80%
Brooke-Alvinston, Municipality of	Alvinston Distribution System	100.00%	100.00%
Bruce Mines, Town of	Bruce Mines Water Treatment Plant	97.28%	100.00%
Burk's Falls, Village of	Burk's Falls Well Supply	86.82%	100.00%
Burlington, City of	Bridgeview Community Distribution System	100.00%	99.54%
Burlington, City of	Burlington Water Treatment Plant	100.00%	100.00%
Burlington, City of	North Aldershot Water Distribution System	100.00%	100.00%
Burlington, City of	Snake Road Water Distribution System	100.00%	100.00%
Caledon, Town of	Alton Well Supply (Amalgamated into the Caledon Village Well Supply)	93.66%	100.00%
Caledon, Town of	Caledon East Well Supply	97.01%	99.92%
Caledon, Town of	Caledon Village Well Supply	93.44%	100.00%
Caledon, Town of	Cheltenham-Terra Cotta Well Supply	97.48%	100.00%
Caledon, Town of	Inglewood Well Supply	97.74%	100.00%
Caledon, Town of	Palgrave Well Supply	97.48%	100.00%
Callander, Municipality of	Callander Water Treatment Plant	95.13%	100.00%
Cambridge, City of	Cambridge Distribution System	100.00%	99.94%
Cambridge, City of	Cambridge Well Supply	96.99%	100.00%
Carleton Place, Town of	Carleton Place Water Treatment Plant	100.00%	99.89%
Casselman, Village of	Casselman Water Treatment Plant	100.00%	100.00%
Cavan-Monaghan, Township of	Millbrook Well Supply	97.88%	100.00%
Central Elgin, Municipality of	Belmont Well Supply	100.00%	100.00%
Central Elgin, Municipality of	Central Elgin (Elgin Area Water Supply) Distribution System	97.75%	99.93%
Central Elgin, Municipality of	Elgin Primary Area Water Supply	81.97%	100.00%
Central Huron, Municipality of	Auburn Well Supply	100.00%	100.00%
Central Huron, Municipality of	Clinton Well Supply	99.52%	100.00%
Central Huron, Municipality of	Kelly Well Supply	100.00%	98.95%
Central Huron, Municipality of	McClinchey Well Supply	100.00%	100.00%
Central Huron, Municipality of	S.A.M. Well Supply	100.00%	100.00%
Central Huron, Municipality of	Vandewetering Subdivision Well Supply	100.00%	100.00%
Central Manitoulin, Municipality of	Mindemoya Water Treatment Plant	92.90%	100.00%
Centre Wellington, Township of	Elora Well Supply (Amalgamated into Township of Centre Wellington Well Supply)	96.61%	N/A*
Centre Wellington, Township of	Township of Centre Wellington Well Supply	91.50%	99.93%
Champlain, Township of	Laurentian Park Distribution System	100.00%	100.00%
Champlain, Township of	L'Orignal Distribution System	100.00%	99.68%

* Drinking water quality data is not available for three systems that have been officially unregistered. One system amalgamated in the previous fiscal year and two systems ceased operation.

APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Champlain, Township of	Vankleek Hill Distribution System	100.00%	100.00%
Chapleau, Township of	Chapleau Water Treatment Plant	97.47%	100.00%
Chapple, Township of	Barwick Well Supply	100.00%	100.00%
Charlton and Dack, Municipality of	Bradley Subdivision Distribution System	100.00%	95.00%
Charlton and Dack, Municipality of	Charlton Water Treatment Plant	100.00%	100.00%
Chatham-Kent, Municipality of	Bothwell (West Elgin Area Water Supply) Distribution System	100.00%	100.00%
Chatham-Kent, Municipality of	Chatham Water Treatment Plant	96.89%	100.00%
Chatham-Kent, Municipality of	Highgate Pure Water Well Supply	96.12%	99.11%
Chatham-Kent, Municipality of	North Wallaceburg Distribution System	100.00%	100.00%
Chatham-Kent, Municipality of	Ridgetown Well Supply	97.42%	99.64%
Chatham-Kent, Municipality of	South Chatham-Kent Water Treatment Plant	94.24%	99.91%
Chatham-Kent, Municipality of	Wallaceburg Water Treatment Plant	100.00%	99.93%
Chatham-Kent, Municipality of	Wheatley Water Treatment Plant	98.61%	100.00%
Chatsworth, Township of	Chatsworth Well Supply	96.95%	100.00%
Chatsworth, Township of	Walter's Falls Well Supply	90.91%	100.00%
Clarence-Rockland, City of	Rockland Water Treatment Plant	100.00%	99.71%
Clarington, Municipality of	Bowmanville Water Treatment Plant	92.70%	99.77%
Clarington, Municipality of	Newcastle Water Treatment Plant	100.00%	100.00%
Clarington, Municipality of	Orono Well Supply	100.00%	100.00%
Clearview, Township of	Buckingham Woods Well Supply	100.00%	100.00%
Clearview, Township of	Colling-Woodlands Well Supply	100.00%	99.24%
Clearview, Township of	Creemore Well Supply	100.00%	100.00%
Clearview, Township of	McKean Subdivision Well Supply	100.00%	99.50%
Clearview, Township of	New Lowell Well Supply	100.00%	100.00%
Clearview, Township of	Stayner Well Supply	100.00%	100.00%
Cobalt, Town of	Cobalt Water Treatment Plant	95.39%	99.42%
Cobourg, Town of	Cobourg Water Treatment Plant	99.51%	100.00%
Cochrane, Town of	Cochrane Well Supply	98.20%	99.85%
Coleman, Township of	Coleman Distribution System	100.00%	100.00%
Collingwood, Town of	Collingwood (Raymond A. Barker Ultrafiltration Plant) Water Treatment Plant	100.00%	100.00%
Cornwall, City of	Cornwall Water Treatment Plant	100.00%	99.89%
Cramahe, Township of	Colborne Well Supply	99.48%	100.00%
Dawn-Euphemia, Township of	Dawn-Euphemia Water Distribution System	100.00%	100.00%
Deep River, Town of	Deep River Water Treatment Plant	84.52%	100.00%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Deseronto, Town of	Deseronto Water Treatment Plant	97.49%	100.00%
Dryden, City of	Dryden Water Treatment Plant	98.38%	100.00%
Dubreuilville, Township of	Dubreuilville Well Supply	96.40%	100.00%
Dutton/Dunwich, Municipality of	Dutton-Dunwich (West Elgin Area Water Supply) Distribution System	100.00%	100.00%
Ear Falls, Township of	Ear Falls Water Treatment Plant	98.28%	100.00%
East Garafraxa, Township of	Marsville Subdivision Well Supply	94.77%	100.00%
East Gwillimbury, Town of	Holland Landing Well Supply	100.00%	100.00%
East Gwillimbury, Town of	Holland-Queensville-Sharon Distribution System	100.00%	99.82%
East Gwillimbury, Town of	Mount Albert Distribution System	100.00%	100.00%
East Gwillimbury, Town of	Mount Albert Well Supply	100.00%	100.00%
East Gwillimbury, Town of	Queensville (York Region) Well Supply	100.00%	100.00%
East Gwillimbury, Town of	Yonge/Green Lane Distribution System	100.00%	100.00%
East Luther Grand Valley, Township of	East Luther Grand Valley Well Supply	100.00%	100.00%
East Zorra-Tavistock, Township of	Hickson-King Subdivision Well Supply	100.00%	100.00%
East Zorra-Tavistock, Township of	Innerkip Well Supply	96.40%	100.00%
East Zorra-Tavistock, Township of	Tavistock Well Supply	94.43%	100.00%
Edwardsburgh/Cardinal, Township of	Bennett Street Well Supply	93.65%	100.00%
Edwardsburgh/Cardinal, Township of	Cardinal Water Treatment Plant	100.00%	100.00%
Edwardsburgh/Cardinal, Township of	Edwardsburgh Industrial Park Distribution System	100.00%	100.00%
Elizabethtown-Kitley, Township of	Elizabethtown-Kitley Distribution System	99.08%	100.00%
Elliot Lake, City of	Elliot Lake Water Treatment Plant	94.23%	100.00%
Emo, Township of	Emo Water Treatment Plant	96.17%	100.00%
Englehart, Town of	Englehart Well Supply	100.00%	100.00%
Enniskillen, Township of	Enniskillen Township Distribution System	100.00%	100.00%
Erin, Town of	Erin Well Supply	94.26%	99.86%
Erin, Town of	Hillsburgh Well Supply	95.01%	100.00%
Espanola, Town of	Espanola Water Treatment Plant	94.96%	100.00%
Essa, Township of	Angus Well Supply	100.00%	99.88%
Essa, Township of	Baxter Distribution System	100.00%	100.00%
Essa, Township of	Glen Ave (Thornton) Well Supply	100.00%	100.00%
Essex, Town of	Essex (Union Water Treatment Plant) Distribution System	100.00%	100.00%
Essex, Town of	Harrow-Colchester South Water Treatment Plant	100.00%	100.00%
Fauquier-Strickland, Township of	Fauquier Water Treatment Plant	97.33%	99.75%
Fort Erie, Town of	Fort Erie (Rosehill) Water Treatment Plant	100.00%	100.00%
Fort Erie, Town of	Fort Erie Distribution System	96.05%	100.00%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Fort Frances, Town of	Fort Frances Water Treatment Plant	100.00%	100.00%
Front of Yonge, Township of	Miller Manor Apartments Well Supply	92.97%	100.00%
Galway-Cavendish and Harvey, Township of	Alpine/Pirates Glen Well Supply	100.00%	99.74%
Galway-Cavendish and Harvey, Township of	Buckhorn Lake Estates Well Supply	89.66%	100.00%
Gananoque, Town of	James W. King Water Treatment Plant	100.00%	99.65%
Georgian Bay, Township of	Mactier (Beech Avenue) Water Treatment Plant	93.21%	99.42%
Georgian Bay, Township of	Port Severn Water Treatment Plant	100.00%	100.00%
Georgian Bluffs, Township of	East Linton and Area Water Treatment Plant	94.92%	100.00%
Georgian Bluffs, Township of	Oxenden Distribution System	100.00%	100.00%
Georgian Bluffs, Township of	Pottawatomi Village Well Supply	80.60%	100.00%
Georgian Bluffs, Township of	Presquile Water Treatment Plant	94.77%	99.19%
Georgian Bluffs, Township of	Shallow Lake Well Supply	94.04%	99.09%
Georgina, Town of	Georgina Water Treatment Plant	100.00%	99.74%
Georgina, Town of	Keswick Water Treatment Plant	100.00%	100.00%
Georgina, Town of	Keswick-Sutton Distribution System	93.39%	99.94%
Goderich, Town of	Goderich Water Treatment Plant	88.84%	99.90%
Gore Bay, Town of	Gore Bay Water Treatment Plant	98.86%	100.00%
Gravenhurst, Town of	Gravenhurst Water Treatment Plant	97.50%	99.86%
Greater Napanee, Town of	A.L. Dafoe Water Treatment Plant	98.55%	99.87%
Greater Napanee, Town of	Sandhurst Shores Water Treatment Plant	98.08%	97.96%
Greater Sudbury, City of	Blezard Valley Well Supply	100.00%	99.96%
Greater Sudbury, City of	Capreol Well Supply	96.29%	100.00%
Greater Sudbury, City of	Dowling Well Supply	93.01%	99.84%
Greater Sudbury, City of	Falconbridge (Sudbury) Distribution System	100.00%	100.00%
Greater Sudbury, City of	Falconbridge Well Supply	100.00%	100.00%
Greater Sudbury, City of	Garson Well Supply	93.36%	100.00%
Greater Sudbury, City of	Levack (Sudbury) Distribution System	100.00%	100.00%
Greater Sudbury, City of	Levack Well Supply	100.00%	99.74%
Greater Sudbury, City of	Onaping (Sudbury) Distribution System	100.00%	99.70%
Greater Sudbury, City of	Onaping Well Supply	97.86%	99.79%
Greater Sudbury, City of	Sudbury (David St) Water Treatment Plant	96.47%	99.86%
Greater Sudbury, City of	Sudbury (Wahnapitei) Water Treatment Plant	100.00%	100.00%
Greater Sudbury, City of	Vermillion (Inco) Water Treatment Plant	97.62%	100.00%
Greater Sudbury, City of	Vermillion Distribution System	100.00%	100.00%
Greenstone, Municipality of	Beardmore Water Treatment Plant	100.00%	100.00%
Greenstone, Municipality of	Caramat Water Treatment Plant	62.45%	98.17%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Greenstone, Municipality of	Geraldton Water Treatment Plant	100.00%	100.00%
Greenstone, Municipality of	Longlac Water Treatment Plant	100.00%	100.00%
Greenstone, Municipality of	Nakina Well Supply	94.12%	100.00%
Grey Highlands, Municipality of	Kimberley-Amik-Talisman Well Supply	100.00%	100.00%
Grey Highlands, Municipality of	Markdale Well Supply	95.86%	99.71%
Grimsby, Town of	Grimsby Distribution System	98.11%	98.83%
Grimsby, Town of	Grimsby Water Treatment Plant	97.38%	99.80%
Guelph, City of	Guelph Well Supply	91.97%	99.98%
Guelph/Eramosa, Township of	Gazer Mooney Subdivision Distribution System	98.84%	100.00%
Guelph/Eramosa, Township of	Hamilton Drive Well Supply	95.15%	100.00%
Guelph/Eramosa, Township of	Rockwood Well Supply	91.68%	100.00%
Haldimand County	Caledonia/Cayuga (Hamilton Water Treatment Plant) Distribution System	100.00%	99.79%
Haldimand County	Dunnville Water Treatment Plant	99.51%	100.00%
Haldimand County	Nanticoke and Trunk Main Water Treatment Plant	100.00%	99.91%
Halton Hills, Town of	Acton Well Supply	100.00%	99.93%
Halton Hills, Town of	Georgetown Well Supply	99.54%	99.90%
Hamilton, City of	Carlisle Well Supply	100.00%	99.92%
Hamilton, City of	Fifty Road Distribution System	100.00%	100.00%
Hamilton, City of	Freelton Well Supply	97.57%	99.72%
Hamilton, City of	Greensville Well Supply	100.00%	100.00%
Hamilton, City of	Hamilton Water Treatment Plant	97.65%	99.97%
Hamilton, City of	Lynden Well Supply	98.19%	99.65%
Hamilton, Township of	Camborne Well Supply	100.00%	100.00%
Hamilton, Township of	Creighton Heights Well Supply	100.00%	100.00%
Hamilton, Township of	Hamilton Township Water Agreement Distribution System	100.00%	100.00%
Havelock-Belmont-Methuen, Township of	Havelock Well Supply	100.00%	100.00%
Hawkesbury, Town of	Hawkesbury Water Treatment Plant	100.00%	99.82%
Hearst, Town of	Hearst Water Treatment Plant	96.18%	99.85%
Highlands East, Municipality of	Cardiff Well Supply	82.22%	100.00%
Highlands East, Municipality of	Dyno Estates Well Supply	94.83%	100.00%
Hilton Beach, Village of	Hilton Beach Well Supply	100.00%	99.24%
Hornepayne, Township of	Hornepayne Well Supply	100.00%	100.00%
Huntsville, Town of	Fairyview Water Treatment Plant	99.10%	100.00%
Huntsville, Town of	Port Sydney Well Supply	96.85%	100.00%
Huron East, Municipality of	Brucefield Well Supply	99.48%	100.00%

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Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Huron East, Municipality of	Brussels Well Supply	98.41%	99.68%
Huron East, Municipality of	Seaforth Well Supply	97.18%	100.00%
Huron East, Municipality of	Vanastra Distribution System	97.34%	100.00%
Huron-Kinloss, Township of	Huronville Subdivision Distribution System	95.24%	99.73%
Huron-Kinloss, Township of	Lakeshore Well Supply	83.70%	100.00%
Huron-Kinloss, Township of	Lucknow Well Supply	64.80%	100.00%
Huron-Kinloss, Township of	Ripley Well Supply	88.65%	99.44%
Huron-Kinloss, Township of	Whitechurch Well Supply	75.41%	100.00%
Ignace, Township of	Ignace Well Supply	100.00%	100.00%
Ingersoll, Town of	Ingersoll Well Supply	97.69%	99.91%
Innisfil, Town of	Alcona Water Treatment Plant	93.22%	100.00%
Innisfil, Town of	Churchill Well Supply	90.63%	99.36%
Innisfil, Town of	Cookstown Well Supply	99.00%	100.00%
Innisfil, Town of	Goldcrest Well Supply	95.19%	100.00%
Innisfil, Town of	Golf Haven Well Supply	97.38%	99.02%
Innisfil, Town of	Innisfil Heights Well Supply	95.82%	100.00%
Innisfil, Town of	Stroud Well Supply	95.46%	99.17%
Iroquois Falls, Town of	Iroquois Falls Well Supply	88.95%	99.14%
Iroquois Falls, Town of	Monteith Correctional Centre Well Supply	97.37%	100.00%
Iroquois Falls, Town of	Monteith Distribution System	95.22%	100.00%
Iroquois Falls, Town of	Porquis Junction Well Supply	97.72%	100.00%
James, Township of	Elk Lake Well Supply	100.00%	100.00%
Johnson, Township of	Desbarats Water Treatment Plant	100.00%	100.00%
Kapuskasing, Town of	Kapuskasing Well Supply	92.16%	100.00%
Kawartha Lakes, City of	Birchpoint Estates Well Supply	100.00%	99.45%
Kawartha Lakes, City of	Bobcaygeon Water Treatment Plant	93.39%	100.00%
Kawartha Lakes, City of	Canadiana Shores Well Supply	91.75%	100.00%
Kawartha Lakes, City of	Fenelon Falls Water Treatment Plant	93.53%	99.70%
Kawartha Lakes, City of	Janetville Well Supply	98.01%	99.73%
Kawartha Lakes, City of	King's Bay Well Supply	86.35%	100.00%
Kawartha Lakes, City of	Kinmount Water Treatment Plant	100.00%	100.00%
Kawartha Lakes, City of	Lindsay Water Treatment Plant	100.00%	99.65%
Kawartha Lakes, City of	Manilla Well Supply	100.00%	100.00%
Kawartha Lakes, City of	Manorview Well Supply	97.12%	100.00%
Kawartha Lakes, City of	Mariposa Estates Well Supply	87.67%	95.29%
Kawartha Lakes, City of	Norland Water Treatment Plant	97.94%	100.00%

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Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Kawartha Lakes, City of	Omemee Well Supply	93.94%	100.00%
Kawartha Lakes, City of	Pinewood Well Supply	100.00%	99.72%
Kawartha Lakes, City of	Pleasant Point Well Supply	96.49%	100.00%
Kawartha Lakes, City of	Sonya Village Subdivision Well Supply	100.00%	100.00%
Kawartha Lakes, City of	Southview Estates Water Treatment Plant	100.00%	100.00%
Kawartha Lakes, City of	Victoria Place Well Supply	89.94%	100.00%
Kawartha Lakes, City of	Western Trent/Palmina Well Supply	100.00%	100.00%
Kawartha Lakes, City of	Woodfield Well Supply	97.01%	100.00%
Kawartha Lakes, City of	Woodville Well Supply	94.08%	100.00%
Kenora, City of	Kenora Area Water Treatment Plant	97.86%	99.88%
Killaloe, Hagarty and Richards, Township of	Killaloe Well Supply	100.00%	99.75%
Killarney, Municipality of	Killarney Water Treatment Plant	100.00%	100.00%
Kincardine, Municipality of	Armow Well Supply	100.00%	98.50%
Kincardine, Municipality of	Kincardine Water Treatment Plant	100.00%	99.73%
Kincardine, Municipality of	Scott's Point Well Supply	100.00%	97.37%
Kincardine, Municipality of	Tiverton Well Supply	97.40%	97.66%
Kincardine, Municipality of	Underwood Well Supply	100.00%	97.37%
King, Township of	Ansnorveldt Distribution System	100.00%	100.00%
King, Township of	Ansnorveldt Well Supply	100.00%	100.00%
King, Township of	King City Distribution System	100.00%	100.00%
King, Township of	King City Well Supply	100.00%	100.00%
King, Township of	Nobleton Distribution System	100.00%	100.00%
King, Township of	Nobleton Well Supply	100.00%	100.00%
King, Township of	Schomberg Distribution System	100.00%	99.06%
King, Township of	Schomberg Well Supply	100.00%	100.00%
Kingston, City of	Cana Well Supply	100.00%	100.00%
Kingston, City of	King Street Water Treatment Plant	97.75%	99.96%
Kingston, City of	Point Pleasant Water Treatment Plant	100.00%	100.00%
Kingsville, Town of	Kingsville (Union Water Treatment Plant) Distribution System	100.00%	100.00%
Kingsville, Town of	Union (Essex County) Area Water Treatment Plant	98.56%	99.39%
Kirkland Lake, Town of	L.J. Sherratt Water Treatment Plant	100.00%	100.00%
Kitchener, City of	Kitchener Distribution System	100.00%	99.85%
Kitchener, City of	Mannheim Water Supply System	100.00%	100.00%
Lake of Bays, Township of	Baysville Birch Glen Water Treatment Plant	99.10%	100.00%
Lakeshore, Town of	Belle River Water Treatment Plant	100.00%	100.00%
Lakeshore, Town of	Lakeshore (Tecumseh Water Service Area) Distribution System	100.00%	100.00%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Lakeshore, Town of	Lakeshore (Union Water Treatment Plant) Distribution System	93.98%	100.00%
Lakeshore, Town of	Lighthouse Cove Distribution System	97.35%	100.00%
Lakeshore, Town of	Stoney Point Water Treatment Plant	94.42%	100.00%
Lambton Shores, Municipality of	East Lambton Shores Water Distribution System	100.00%	99.88%
Lambton Shores, Municipality of	West Lambton Shores Water Distribution System	100.00%	100.00%
Larder Lake, Township of	Larder Lake Well Supply	100.00%	98.23%
LaSalle, Town of	Town of LaSalle (Windsor) Distribution System	100.00%	100.00%
Latchford, Town of	Latchford Water Treatment Plant	96.32%	99.47%
Laurentian Hills, Town of	Chalk River Water Treatment Plant	58.60%	100.00%
Laurentian Valley, Township of	Laurentian Valley Distribution System	90.67%	100.00%
Leamington, Municipality of	Leamington (Union Water Treatment Plant) Distribution System	100.00%	100.00%
Leamington, Municipality of	Leamington (Wheatley) Distribution System	92.73%	100.00%
Leeds and the Thousand Islands, Township of	Lansdowne Well Supply	100.00%	100.00%
Lincoln, Town of	Lincoln (Beamsville) (Grimsby Water Treatment Plant) Distribution System	97.13%	100.00%
Lincoln, Town of	Lincoln (Vineland/Jordan) (Decew Water Treatment Plant) Distribution System	100.00%	99.79%
London, City of	City of London Distribution System	100.00%	99.91%
Loyalist, Township of	Bath Water Treatment Plant	94.20%	99.80%
Loyalist, Township of	Fairfield Water Treatment Plant	100.00%	100.00%
Lucan Biddulph, Township of	Lucan Biddulph (Lake Huron Area Water Supply) Distribution System	96.56%	100.00%
Macdonald, Meredith and Aberdeen Additional, Township of	Echo Bay Water Treatment Plant	100.00%	100.00%
Machin, Township of	Vermilion Bay Water Treatment Plant	100.00%	100.00%
Madawaska Valley, Township of	Barry's Bay Water Treatment Plant	96.14%	100.00%
Madoc, Township of	Madoc Well Supply	96.83%	100.00%
Malahide, Township of	Malahide (Elgin Area Water Supply) Distribution System	99.20%	98.30%
Malahide, Township of	Port Burwell Secondary Distribution System	100.00%	100.00%
Manitouwadge, Township of	Manitouwadge Well Supply	97.57%	100.00%
Mapleton, Township of	Drayton Well Supply	83.59%	100.00%
Mapleton, Township of	Moorefield Well Supply	80.59%	100.00%
Marathon, Town of	Marathon Well Supply	99.04%	100.00%
Markham, Town of	Markham Distribution System	100.00%	99.73%
Markstay-Warren, Municipality of	Markstay Distribution System	98.15%	100.00%

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Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Markstay-Warren, Municipality of	Warren Well Supply	100.00%	100.00%
Marmora and Lake, Municipality of	Deloro Well Supply	97.22%	100.00%
Marmora and Lake, Municipality of	Marmora Water Treatment Plant	100.00%	100.00%
Matachewan, Township of	Matachewan Well Supply	100.00%	99.27%
Mattawa, Town of	Mattawa Well Supply	95.11%	100.00%
Mattice-Val Côté, Township of	Mattice Water Treatment Plant	100.00%	100.00%
McDougall, Township of	McDougall Nobel Distribution System	97.92%	99.09%
McGarry, Township of	Virginiatown-Kearns Well Supply	100.00%	99.11%
Meaford, Municipality of	Leith Distribution System	96.67%	100.00%
Meaford, Municipality of	Meaford Public Utilities Commission Water Treatment Plant	100.00%	99.83%
Merrickville-Wolford, Village of	Merrickville Well Supply	89.92%	99.73%
Middlesex Centre, Municipality of	Birr Well Supply	94.64%	100.00%
Middlesex Centre, Municipality of	Delaware Distribution System	98.75%	99.36%
Middlesex Centre, Municipality of	Kilworth Heights Subdivision Well Supply	90.01%	100.00%
Middlesex Centre, Municipality of	Melrose Well Supply	97.60%	100.00%
Middlesex Centre, Municipality of	Middlesex Centre Distribution System	97.65%	100.00%
Midland, Town of	Midland Well Supply	95.24%	100.00%
Milton, Town of	Campbellville Well Supply	100.00%	99.85%
Milton, Town of	Milton Well Supply	100.00%	100.00%
Minden Hills, Township of	Lutterworth Pines Trailer Park Well Supply	78.03%	100.00%
Minden Hills, Township of	Minden Well Supply	94.99%	100.00%
Minto, Town of	Clifford Well Supply	94.69%	99.69%
Minto, Town of	Harriston Well Supply	96.49%	100.00%
Minto, Town of	Minto Pines Subdivision Well Supply	100.00%	100.00%
Minto, Town of	Palmerston Well Supply	100.00%	100.00%
Mississauga, City of	South Peel (Lakeview) Water Treatment Plant	99.14%	99.91%
Mississauga, City of	South Peel (Lorne Park) Water Treatment Plant	99.12%	99.91%
Mississippi Mills, Town of	Mississippi Mills Well Supply	97.54%	100.00%
Mono, Town of	Cardinal Woods Subdivision Well Supply	98.64%	100.00%
Mono, Town of	Island Lake Well Supply	100.00%	100.00%
Montague, Township of	Montague Distribution System	94.90%	100.00%
Moonbeam, Township of	Moonbeam Well Supply	100.00%	100.00%
Moosonee, Town of	Moosonee Water Treatment Plant	100.00%	99.12%
Morris-Turnberry, Municipality of	Belgrave Well Supply	98.42%	100.00%
Mulmur, Township of	Mansfield Well Supply	100.00%	100.00%

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Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Muskoka Lakes, Township of	Bala Water Treatment Plant	97.52%	100.00%
Muskoka Lakes, Township of	Port Carling (Ferndale Road) Water Treatment Plant	100.00%	100.00%
Nairn and Hyman, Township of	Nairn Centre Water Treatment Plant	100.00%	99.75%
New Tecumseth, Town of	Alliston Well Supply	100.00%	100.00%
New Tecumseth, Town of	Tottenham Well Supply	95.31%	99.03%
Newbury, Village of	Newbury (West Elgin Area Water Supply) Distribution System	86.67%	100.00%
Newmarket, Town of	Newmarket Distribution System	98.08%	99.92%
Newmarket, Town of	Newmarket Well Supply	100.00%	100.00%
Niagara Falls, City of	Niagara Falls Distribution System	97.02%	99.78%
Niagara Falls, City of	Niagara Falls Water Treatment Plant	100.00%	100.00%
Niagara-on-the-Lake, Town of	Bevan Heights Distribution System	97.69%	100.00%
Niagara-on-the-Lake, Town of	Niagara-on-the-Lake Distribution System	96.14%	99.13%
Nipigon, Township of	Nipigon Water Treatment Plant	76.08%	100.00%
Norfolk County	Delhi Water Supply System	100.00%	100.00%
Norfolk County	Port Dover Water Treatment Plant	100.00%	100.00%
Norfolk County	Port Rowan Water Treatment Plant	99.08%	100.00%
Norfolk County	Simcoe Well Supply	98.40%	100.00%
Norfolk County	Waterford Well Supply	98.34%	99.82%
North Bay, City of	North Bay Water Treatment Plant	95.09%	100.00%
North Dumfries, Township of	Ayr Well Supply	100.00%	99.83%
North Dumfries, Township of	Branchton Well Supply	95.91%	100.00%
North Dumfries, Township of	Lloyd Brown Distribution System	100.00%	100.00%
North Dumfries, Township of	Roseville Well Supply	100.00%	100.00%
North Dundas, Township of	Chesterville Well Supply	100.00%	100.00%
North Dundas, Township of	Winchester Well Supply	100.00%	100.00%
North Glengarry, Township of	Alexandria Water Treatment Plant	83.85%	99.83%
North Glengarry, Township of	Glen Robertson Well Supply	82.26%	99.67%
North Grenville, Municipality of	Kemptville Well Supply	94.59%	99.89%
North Huron, Township of	Blyth Well Supply	99.51%	99.81%
North Huron, Township of	Humphrey Subdivision (Belgrave) Distribution System	100.00%	100.00%
North Huron, Township of	Wingham Well Supply	98.50%	100.00%
North Middlesex, Municipality of	North Middlesex (Lake Huron Area Water Supply) Distribution System	96.84%	99.89%
North Perth, Municipality of	Atwood Well Supply	99.53%	99.72%
North Perth, Municipality of	Gowanstown Subdivision Well Supply	99.48%	100.00%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
North Perth, Municipality of	Listowel Well Supply	99.02%	100.00%
North Perth, Municipality of	Molesworth Well Supply	99.46%	100.00%
North Stormont, Township of	Crysler Well Supply	100.00%	100.00%
North Stormont, Township of	Finch Well Supply	100.00%	100.00%
North Stormont, Township of	Moose Creek Well Supply	100.00%	100.00%
Northeastern Manitoulin and The Islands, Town of	Little Current Water Treatment Plant	100.00%	100.00%
Northeastern Manitoulin and The Islands, Town of	Sheguiandah Water Treatment Plant	97.32%	100.00%
Northern Bruce Peninsula, Municipality of	Lion's Head Water Treatment Plant	95.87%	100.00%
Norwich, Township of	Norwich Well Supply	91.67%	100.00%
Norwich, Township of	Otterville-Springford Well Supply	100.00%	100.00%
Oakville, Town of	Oakville Water Treatment Plant	100.00%	100.00%
Oakville, Town of	South Halton Water Distribution System	100.00%	99.85%
Oil Springs, Village of	Oil Springs Water Distribution System	92.58%	100.00%
Oliver Paipoonge, Municipality of	Rosslyn Village Subdivision Well Supply	100.00%	100.00%
Opasatika, Township of	Opasatika Well Supply	98.48%	98.84%
Orangeville, Town of	Orangeville Well Supply	97.78%	99.90%
Orillia, City of	Orillia Water Supply System	74.42%	100.00%
Oro-Medonte, Township of	Canterbury Subdivision Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Cedar Brook Subdivision Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Craighurst Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Harbourwood Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Horseshoe Highlands Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Maplewood Estates Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Medonte Hills Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Robin Crest Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Shanty Bay Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Sugar Bush Well Supply	100.00%	100.00%
Oro-Medonte, Township of	Warminster Well Supply	96.92%	99.70%
Oshawa, City of	Oshawa Water Treatment Plant	100.00%	99.78%
Otonabee-South Monaghan, Township of	Elgeti and Crystal Springs Subdivisions Well Supply	100.00%	100.00%
Otonabee-South Monaghan, Township of	Keene Heights Subdivision Well Supply	100.00%	100.00%
Ottawa, City of	Britannia Water Treatment Plant	100.00%	99.97%
Ottawa, City of	Carp Well Supply	97.22%	100.00%
Ottawa, City of	Kings Park Well Supply	100.00%	100.00%
Ottawa, City of	Lemieux Island Water Treatment Plant	100.00%	100.00%
Ottawa, City of	Munster Hamlet Well Supply	100.00%	100.00%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Ottawa, City of	Shadow Ridge Well Supply	100.00%	100.00%
Ottawa, City of	Vars Well Supply	100.00%	100.00%
Owen Sound, City of	Owen Sound (Richard H. Neath) Water Treatment Plant	95.41%	100.00%
Parry Sound, Town of	Tony Agnello Water Treatment Plant	100.00%	100.00%
Pelham, Town of	Pelham Distribution System	96.23%	100.00%
Pembroke, City of	Pembroke Water Treatment Plant	94.49%	99.91%
Penetanguishene, Town of	Lepage Subdivision (Penetanguishene) Well Supply	100.00%	100.00%
Penetanguishene, Town of	Payette (Penetanguishene) Well Supply	100.00%	100.00%
Perth East, Township of	Milverton Well Supply	100.00%	100.00%
Perth East, Township of	Shakespeare (Miller Ave.) Well Supply	87.22%	100.00%
Perth South, Township of	Sebringville (Black Creek Estates) Well Supply	89.00%	100.00%
Perth South, Township of	St. Pauls Well Supply	96.62%	100.00%
Perth, Town of	Perth Water Treatment Plant	96.17%	100.00%
Petawawa, Town of	Petawawa Water Treatment Plant	98.78%	99.65%
Peterborough, City of	Peterborough Water Treatment Plant	100.00%	99.94%
Petrolia, Town of	Town of Petrolia Bright's Grove Water Treatment Plant	100.00%	100.00%
Pickle Lake, Township of	Pickle Lake Well Supply	100.00%	100.00%
Plympton-Wyoming, Town of	Plympton-Wyoming (Lambton Area Water Supply) Distribution System	100.00%	99.83%
Point Edward, Village of	Point Edward (Lambton Area Water Supply) Distribution System	86.55%	100.00%
Port Colborne, City of	Port Colborne Distribution System	100.00%	99.41%
Port Colborne, City of	Port Colborne Water Treatment Plant	100.00%	100.00%
Port Hope, Municipality of	Port Hope (New) Water Treatment Plant	98.45%	99.81%
Powassan, Municipality of	Powassan Well Supply	95.67%	100.00%
Prescott, Town of	Prescott Water Treatment Plant	100.00%	99.67%
Prince Edward County, City of	Ameliasburgh Hamlet Water Treatment Plant	100.00%	100.00%
Prince Edward County, City of	Consecon/Carrying Place Distribution System	100.00%	99.62%
Prince Edward County, City of	Fenwood Gardens/Rossmore Distribution System	100.00%	100.00%
Prince Edward County, City of	Peats Point Subdivision Well Supply	100.00%	98.00%
Prince Edward County, City of	Picton Water Treatment Plant	96.59%	99.85%
Prince Edward County, City of	Wellington Water Treatment Plant	100.00%	100.00%
Quinte West, City of	Batawa Water Treatment Plant	93.87%	100.00%
Quinte West, City of	Bayside Water Treatment Plant	82.66%	100.00%
Quinte West, City of	Frankford Water Treatment Plant	96.41%	100.00%
Quinte West, City of	Trenton Water Treatment Plant	100.00%	99.91%
Rainy River, Town of	Rainy River Water Treatment Plant	89.80%	100.00%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Ramara, Township of	Bayshore Village Subdivision Well Supply	97.14%	100.00%
Ramara, Township of	Brechin and Lagoon City Water Treatment Plant	100.00%	99.42%
Ramara, Township of	Davy Drive Subdivision Well Supply	100.00%	100.00%
Ramara, Township of	Park Lane Subdivision Well Supply	100.00%	100.00%
Ramara, Township of	Somerset/Knob Hill Water Distribution System	100.00%	99.08%
Ramara, Township of	South Ramara Water Treatment Plant	97.13%	100.00%
Ramara, Township of	Val Harbour Subdivision Well Supply	100.00%	100.00%
Red Lake, Municipality of	Golden Ward Water Treatment Plant	100.00%	99.73%
Red Lake, Municipality of	Madsen Water Treatment Plant	97.55%	99.58%
Red Lake, Municipality of	Red Lake Water Treatment Plant	98.84%	100.00%
Red Rock, Township of	Red Rock Water Treatment Plant	98.09%	99.51%
Renfrew, Town of	Renfrew Water Treatment Plant	94.89%	100.00%
Richmond Hill, Town of	Richmond Hill Distribution System	100.00%	99.86%
Russell, Township of	Embrun-Russell-Marionville Well Supply	100.00%	100.00%
Sables-Spanish Rivers, Township of	Massey Water Treatment Plant	100.00%	99.85%
Sarnia, City of	Lambton Area Water Supply System	100.00%	100.00%
Sarnia, City of	Sarnia (Lambton Area Water Supply) Distribution System	89.11%	100.00%
Saugeen Shores, Town of	Port Elgin Water Treatment Plant	97.50%	100.00%
Saugeen Shores, Town of	Southampton Water Treatment Plant	100.00%	100.00%
Sault Ste. Marie, City of	Sault Ste. Marie Water Supply System	96.29%	100.00%
Schreiber, Township of	Schreiber Water Treatment Plant	95.72%	100.00%
Scugog, Township of	Blackstock Well Supply	100.00%	99.86%
Scugog, Township of	Greenbank Well Supply	100.00%	100.00%
Scugog, Township of	Port Perry Well Supply	100.00%	100.00%
Severn, Township of	Bass Lake Woodlands Well Supply	100.00%	100.00%
Severn, Township of	Coldwater Well Supply	100.00%	100.00%
Severn, Township of	Sandcastle Estates Water Treatment Plant	100.00%	99.21%
Severn, Township of	Severn Estates Well Supply	100.00%	99.21%
Severn, Township of	Washago Water Treatment Plant	100.00%	99.24%
Severn, Township of	West Shore Water Treatment Plant	99.55%	100.00%
Shelburne, Town of	Shelburne Well Supply	94.17%	100.00%
Sioux Lookout, Municipality of	Hudson Water Treatment Plant	97.85%	100.00%
Sioux Lookout, Municipality of	Sioux Lookout Urban Water Treatment Plant	100.00%	100.00%
Smith-Ennismore-Lakefield, Township of	Lakefield Water Treatment Plant	97.57%	100.00%
Smith-Ennismore-Lakefield, Township of	Woodland Acres Subdivision Distribution System	100.00%	100.00%
Smiths Falls, Town of	Smiths Falls Water Treatment Plant	100.00%	99.67%

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Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Smooth Rock Falls, Town of	Smooth Rock Falls Water Treatment Plant	98.14%	100.00%
South Bruce Peninsula, Town of	Cammidge-Collins Well Supply	100.00%	100.00%
South Bruce Peninsula, Town of	Forbes Subdivision Well Supply	98.11%	100.00%
South Bruce Peninsula, Town of	Foreman Well Supply	99.52%	100.00%
South Bruce Peninsula, Town of	Gremik Subdivision Well Supply	98.98%	100.00%
South Bruce Peninsula, Town of	Huronwoods Well Supply	95.97%	100.00%
South Bruce Peninsula, Town of	Oliphant Well Supply	82.50%	96.77%
South Bruce Peninsula, Town of	Robins Well Supply	98.41%	100.00%
South Bruce Peninsula, Town of	Thomson Subdivision Well Supply	99.04%	100.00%
South Bruce Peninsula, Town of	Trask Well Supply	100.00%	95.00%
South Bruce Peninsula, Town of	Wiarton Water Treatment Plant	100.00%	99.80%
South Bruce Peninsula, Town of	Winburk Subdivision Well Supply	100.00%	100.00%
South Bruce, Municipality of	Mildmay Well Supply	97.40%	100.00%
South Bruce, Municipality of	Teeswater Well Supply	97.21%	100.00%
South Dundas, Township of	South Dundas Regional Water Treatment Plant	95.01%	99.60%
South Frontenac, Township of	Sydenham Water Treatment Plant	98.88%	99.03%
South Glengarry, Township of	Glen Walter Water Treatment Plant	99.00%	100.00%
South Glengarry, Township of	Lancaster Water Treatment Plant	98.34%	99.60%
South Glengarry, Township of	Redwood Estates Well Supply	100.00%	98.44%
South Huron, Municipality of	Exeter Water Supply System	97.50%	99.67%
South Huron, Municipality of	Huron Park Distribution System	96.19%	99.77%
South Huron, Municipality of	Lake Huron Primary Area Water Supply	90.16%	100.00%
South Huron, Municipality of	South Huron (Lake Huron Area Water Supply) Distribution System	92.36%	99.16%
South River, Village of	South River Water Treatment Plant	96.33%	100.00%
South Stormont, Township of	Long Sault/Ingleside Regional Water Treatment Plant	95.01%	99.78%
South Stormont, Township of	Newington Well Supply	97.47%	99.75%
South Stormont, Township of	St. Andrews/Rosedale Terrace Distribution System	98.55%	100.00%
Southgate, Township of	Dundalk Well Supply	100.00%	99.75%
Southwest Middlesex, Municipality of	Southwest Middlesex (West Elgin Area Water Supply) Distribution System	97.15%	100.00%
South-West Oxford, Township of	Beachville-Loweville Subdivision Well Supply	96.17%	100.00%
South-West Oxford, Township of	Brownsville Well Supply	92.47%	100.00%
South-West Oxford, Township of	Dereham Centre Well Supply	100.00%	100.00%
South-West Oxford, Township of	Mount Elgin Well Supply	100.00%	100.00%
Southwold, Township of	Southwold (Elgin Area Water Supply) Distribution System	100.00%	100.00%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Spanish, Town of	Spanish Well Supply	100.00%	100.00%
Springwater, Township of	Anten Mills Well Supply	100.00%	99.75%
Springwater, Township of	Del Trend Subdivision Well Supply	100.00%	99.26%
Springwater, Township of	Elmvale Well Supply	100.00%	100.00%
Springwater, Township of	Hillsdale Well Supply	100.00%	99.11%
Springwater, Township of	Midhurst Well Supply	100.00%	100.00%
Springwater, Township of	Minesing Well Supply	97.14%	100.00%
Springwater, Township of	Phelpston Well Supply	100.00%	100.00%
Springwater, Township of	Snow Valley Highlands Well Supply	100.00%	99.86%
Springwater, Township of	Vespra Downs Subdivision Well Supply	100.00%	99.53%
St. Catharines, City of	St. Catharines (Decew) Water Treatment Plant	100.00%	99.91%
St. Catharines, City of	St. Catharines Distribution System	100.00%	99.97%
St. Clair, Township of	St. Clair Township (Lambton Area Water Supply) Distribution System	100.00%	100.00%
St. Joseph, Township of	Richards Landing Well Supply	100.00%	99.76%
St. Marys, Town of	St. Marys Well Supply	95.15%	99.89%
St. Thomas, City of	St. Thomas (Elgin Area Water Supply) Distribution System	91.04%	99.93%
St. Thomas, City of	St. Thomas Secondary Area Water Supply	91.41%	100.00%
Stirling-Rawdon, Township of	Stirling Well Supply	100.00%	100.00%
Stratford, City of	Stratford Well Supply	100.00%	98.77%
Strathroy-Caradoc, Township of	Mount Brydges Well Supply	100.00%	100.00%
Strathroy-Caradoc, Township of	Strathroy Distribution System	100.00%	100.00%
Tay, Township of	Rope Subdivision Water Treatment Plant	98.61%	98.84%
Tay, Township of	Victoria Harbour Water Treatment Plant	98.48%	99.17%
Tecumseh, Town of	Tecumseh (Windsor Water Treatment Plant) Distribution System	97.36%	100.00%
Tehkummah, Township of	South Baymouth Water Treatment Plant	97.87%	100.00%
Temagami, Municipality of	Temagami North Water Treatment Plant	98.55%	99.74%
Temagami, Municipality of	Temagami South Water Treatment Plant	98.43%	100.00%
Temiskaming Shores, City of	Dymond Well Supply	97.38%	100.00%
Temiskaming Shores, City of	Haileybury (Lake Timiskaming) Water Treatment Plant	90.93%	99.82%
Temiskaming Shores, City of	New Liskeard Well Supply	91.30%	99.80%
Terrace Bay, Township of	Terrace Bay Water Treatment Plant	80.71%	100.00%
Thames Centre, Municipality of	Dorchester Well Supply	98.50%	100.00%
Thames Centre, Municipality of	Thorndale Well Supply	96.68%	99.70%
The Blue Mountains, Town of	Thornbury Water Treatment Plant	97.52%	100.00%
The Nation, Municipality of	Limoges Well Supply	100.00%	100.00%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
The Nation, Municipality of	St. Isidore Well Supply	100.00%	99.66%
The North Shore, Township of	Pronto East Subdivision Water Treatment Plant	92.75%	100.00%
The North Shore, Township of	Serpent River (The North Shore Township) Water Treatment Plant	96.01%	98.19%
Thessalon, Town of	Thessalon Water Treatment Plant	100.00%	100.00%
Thorold, City of	Thorold (Port Robinson Area) Distribution System	87.69%	100.00%
Thorold, City of	Thorold (South End of Thorold) Distribution System	91.49%	100.00%
Thorold, City of	Thorold Distribution System	95.12%	99.42%
Thunder Bay, City of	Thunder Bay (Bare Point Road) Water Treatment Plant	96.39%	99.93%
Thunder Bay, City of	Thunder Bay (Loch Lomond) Water Treatment Plant	100.00%	N/A*
Tillsonburg, Town of	Tillsonburg Well Supply	97.70%	100.00%
Timmins, City of	Timmins (Mattagami) Water Treatment Plant	87.04%	99.81%
Tiny, Township of	Bluewater Well Supply	100.00%	100.00%
Tiny, Township of	Cook's Lake Well Supply	96.02%	100.00%
Tiny, Township of	Georgian Bay Estates Well Supply	100.00%	100.00%
Tiny, Township of	Georgian Highlands Well Supply	96.02%	100.00%
Tiny, Township of	Georgian Sands Well Supply	96.22%	100.00%
Tiny, Township of	Lafontaine Well Supply	100.00%	100.00%
Tiny, Township of	Lefaive Well Supply	100.00%	100.00%
Tiny, Township of	Pennorth Well Supply	96.58%	100.00%
Tiny, Township of	Perkinsfield Well Supply	100.00%	99.79%
Tiny, Township of	Rayko Water System Well Supply	100.00%	100.00%
Tiny, Township of	Sand Castle Well Supply	100.00%	99.25%
Tiny, Township of	Sawlog Bay Well Supply	100.00%	100.00%
Tiny, Township of	Tee Pee Point Well Supply	100.00%	100.00%
Tiny, Township of	Thunder Bay Well Supply	100.00%	100.00%
Tiny, Township of	Vanier Woods Well Supply	100.00%	100.00%
Tiny, Township of	Whip-Poor-Will II Well Supply	100.00%	100.00%
Tiny, Township of	Woodland Beach Well Supply	100.00%	100.00%
Tiny, Township of	Wyevale Well Supply	96.17%	99.85%
Toronto, City of	City of Toronto Distribution System	100.00%	99.93%
Toronto, City of	F.J. Horgan Water Treatment Plant	100.00%	100.00%
Toronto, City of	Toronto (Island) Water Treatment Plant	98.98%	99.97%
Toronto, City of	Toronto (R.C. Harris) Water Treatment Plant	99.54%	99.76%
Toronto, City of	Toronto (R.L. Clark) Water Treatment Plant	100.00%	100.00%
Trent Hills, Municipality of	Campbellford Water Treatment Plant	95.13%	99.87%

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Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Trent Hills, Municipality of	Hastings Water Treatment Plant	99.56%	99.45%
Trent Hills, Municipality of	Warkworth Water Treatment Plant	96.10%	99.52%
Tweed, Municipality of	Tweed Well Supply	97.70%	100.00%
Uxbridge, Township of	Uxbridge Well Supply	100.00%	99.90%
Val Rita-Harty, Township of	Val Rita Well Supply	97.03%	100.00%
Vaughan, City of	Kleinburg Distribution System	100.00%	99.81%
Vaughan, City of	Kleinburg Well Supply	100.00%	100.00%
Vaughan, City of	Vaughan (Toronto Water) Distribution System	100.00%	99.70%
Vaughan, City of	York Distribution System	100.00%	99.90%
Warwick, Township of	Warwick (Lambton Area Water Supply) Distribution System	96.18%	100.00%
Wasaga Beach, Town of	Wasaga Beach Well Supply	97.60%	100.00%
Waterloo, City of	Kitchener Well Supply	100.00%	99.65%
Waterloo, City of	Maryhill Village Heights Well Supply	100.00%	100.00%
Waterloo, City of	Waterloo Distribution System	98.98%	99.97%
Waterloo, City of	Waterloo Well Supply	100.00%	100.00%
Wawa, Municipality of	Wawa Water Treatment Plant	98.17%	100.00%
Welland, City of	Welland Distribution System	96.20%	99.91%
Welland, City of	Welland Water Treatment Plant	99.48%	100.00%
Wellesley, Township of	Linwood Well Supply	99.11%	100.00%
Wellesley, Township of	St. Clements Well Supply	97.55%	100.00%
Wellesley, Township of	Wellesley Well Supply	100.00%	100.00%
Wellington North, Township of	Arthur Well Supply	100.00%	100.00%
Wellington North, Township of	Mount Forest Well Supply	100.00%	100.00%
West Elgin, Municipality of	West Elgin Water Treatment Plant	98.67%	100.00%
West Grey, Municipality of	Durham Well Supply	100.00%	100.00%
West Grey, Municipality of	Neustadt Well Supply	96.15%	99.75%
West Lincoln, Township of	Smithville (Grimsby Water Treatment Plant) Distribution System	97.83%	99.77%
West Nipissing, Municipality of	Sturgeon Falls Water Treatment Plant	97.52%	99.70%
West Nipissing, Municipality of	Verner Water Treatment Plant	97.53%	100.00%
West Perth, Municipality of	Mitchell Well Supply	90.73%	100.00%
Westport, Village of	Westport Well Supply	91.37%	99.76%
Whitby, Town of	Whitby Water Treatment Plant	100.00%	100.00%
Whitchurch-Stouffville, Town of	Ballantrae/Musselman Lake Distribution System	97.82%	99.82%
Whitchurch-Stouffville, Town of	Ballantrae/Musselman's Well Supply	100.00%	100.00%
Whitchurch-Stouffville, Town of	Stouffville Distribution System	97.84%	99.36%

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APPENDIX 1: Municipal Residential Drinking Water System 2008-09 Inspection Ratings and Drinking Water Quality Results (Percentage of Tests Meeting Standards)

Municipal Location (Municipality Where the Drinking Water System is Located)	Drinking Water System Name	2008-09 Inspection Rating	2008-09 Drinking Water Quality (% of Tests Meeting Standards)
Whitchurch-Stouffville, Town of	Stouffville Well Supply	100.00%	100.00%
White River, Township of	White River Water Supply System	100.00%	99.75%
Whitewater Region, Township of	Beachburg Well Supply	97.52%	99.75%
Whitewater Region, Township of	Cobden Water Treatment Plant	97.56%	99.77%
Whitewater Region, Township of	Haley Well Supply	95.21%	100.00%
Wilmot, Township of	Foxboro Well Supply	100.00%	100.00%
Wilmot, Township of	Mannheim Village Distribution System	100.00%	97.17%
Wilmot, Township of	Mannheim Village Well Supply	98.95%	100.00%
Wilmot, Township of	New Dundee Distribution System	100.00%	100.00%
Wilmot, Township of	New Dundee Well Supply	100.00%	100.00%
Wilmot, Township of	New (Amalgamated) Hamburg-Baden Distribution System	93.37%	100.00%
Wilmot, Township of	New Hamburg-Baden Well Supply	100.00%	100.00%
Wilmot, Township of	Shingletown Distribution System	100.00%	100.00%
Wilmot, Township of	Shingletown Well Supply	93.64%	100.00%
Wilmot, Township of	St. Agatha Distribution System	97.28%	100.00%
Wilmot, Township of	St. Agatha Well Supply	100.00%	100.00%
Wilmot, Township of	St. Agatha/Sararas Well Supply	98.25%	100.00%
Wilmot, Township of	St. Agatha/Swartzentruber Well Supply	98.25%	100.00%
Windsor, City of	Windsor Water Treatment Plant	97.67%	100.00%
Woodstock, City of	Woodstock Well Supply	90.66%	99.83%
Woolwich, Township of	Breslau (Elroy Acres) Distribution System	94.66%	100.00%
Woolwich, Township of	Conestogo Golf Distribution System	93.02%	100.00%
Woolwich, Township of	Conestogo Golf Well Supply	100.00%	100.00%
Woolwich, Township of	Conestoga Plains Distribution System	94.23%	100.00%
Woolwich, Township of	Conestogo Plains Well Supply	100.00%	100.00%
Woolwich, Township of	Heidelberg (Woolwich Township) Distribution System	94.66%	100.00%
Woolwich, Township of	Heidelberg Well Supply	100.00%	100.00%
Woolwich, Township of	Maryhill Distribution System	100.00%	100.00%
Woolwich, Township of	Maryhill Village Heights Distribution System	100.00%	100.00%
Woolwich, Township of	Maryhill Well Supply	100.00%	100.00%
Woolwich, Township of	St. Jacobs/Elmira Distribution System	94.93%	100.00%
Woolwich, Township of	West Montrose Distribution System	100.00%	100.00%
Woolwich, Township of	West Montrose Well Supply	100.00%	100.00%
Zorra, Township of	Embro Well Supply	98.21%	100.00%
Zorra, Township of	Lakeside Well Supply	100.00%	100.00%
Zorra, Township of	Thamesford Well Supply	94.44%	99.79%

* Drinking water quality data is not available for three systems that have been officially unregistered. One system amalgamated in the previous fiscal year and two systems ceased operation.

APPENDIX 2-A-1: Summary of Municipal Residential Drinking Water Systems Receiving Contravention Orders in 2008-09 as a Result of an Inspection

Drinking Water System Owner	Drinking Water System Name	Date Order Issued	Order Synopsis
Atikokan, The Corporation of the Township of	Atikokan Water Treatment Plant	August 10, 2009	• Provide all information required by the Ministry of the Environment • Provide adequate reasons for not adhering to the installation location of equipment as stated in Certificate of Approval • Provide a list of any other items that deviate from the original submission to the Ministry of the Environment.
Blind River, The Corporation of the Town of	Blind River Well Supply	July 25, 2008	• Conduct a study on the issue of elevated trihalomethane (THM) levels in the Blind River distribution system and outline the actions that will be taken to reduce THM levels • Collect at least one sample from select distribution ends each month.
Burk's Falls, The Corporation of the Village of	Burk's Falls Well Supply	November 14, 2008	• Define and implement an inspection maintenance schedule for all wells associated with the water treatment system.
Elliot Lake, The Corporation of the City of	Elliot Lake Water Treatment Plant	December 23, 2008	• Provide an action plan regarding improving the disinfection process • Provide an action plan for updating the operating system.
Greater Sudbury, City of	Sudbury (Wahnapitei) Water Treatment Plant	August 12, 2008	• Submit the final detailed design and upgrades required to comply with the Certificate of Approval to the Ministry of the Environment for approval.
Greenstone, The Corporation of the Municipality of	Caramat Water Treatment Plant	June 10, 2009	• Ensure that the maximum water taking complies with the Permit to Take Water • Provide a report indicating how compliance will be achieved with the rated capacity for the maximum flow rate into the treatment system, and how THM requirements will be met • Provide a report detailing how the design capabilities required will be met • Review the maintenance of chlorine and turbidity meters and ensure the proper operation on a continual basis.
Huron-Kinloss, The Corporation of the Township of	Lucknow Well Supply	November 28, 2008	• Conduct a monitoring and alarming equipment study to identify operational issues.
Kawartha Lakes, The Corporation of the City of	Victoria Place Well Supply	August 28, 2008	• Develop a detailed written procedure outlining how the primary disinfection alarm will be operated and maintained.
Mapleton, The Corporation of the Township of	Moorefield Well Supply	March 6, 2009	• Provide an action plan to address all identified issues with the required physical/chemical water quality monitoring.

APPENDIX 2-A-1: Summary of Municipal Residential Drinking Water Systems Receiving Contravention Orders in 2008-09 as a Result of an Inspection

Drinking Water System Owner	Drinking Water System Name	Date Order Issued	Order Synopsis
Nipigon, The Corporation of the Township of	Nipigon Water Treatment Plant	March 17, 2009	• Comply with Certificate of Approval and complete an assessment and capacity review of the gravity filters and submit the results to the Ministry of the Environment • Ensure that the filtration process meets performance criterion • Ensure that water treatment equipment is operated in a manner that achieves the design capabilities • Ensure that the drinking water system is maintained in a fit state of repair • Ensure that continuous monitoring equipment must cause an alarm to sound immediately for a parameter that is above or below the alarm standard • Ensure that the drinking water system is operated by persons having the training or expertise for their operating functions • Implement a program to sample, monitor and assess the risk of creosote in the reservoirs and/or remove the potential for contamination.
North Bay, The Corporation of the City of	North Bay Water Treatment Plant	May 22, 2008	• Develop and implement a procedure to ensure that the appropriate approval is obtained prior to any alteration at the North Bay Water Treatment Plant or at any of the facilities located in the North Bay Distribution System.
North Glengarry, The Corporation of the Township of	Alexandria Water Treatment Plant	December 5, 2008	• Provide an action plan to address the required corrective actions when an adverse drinking water test result is received • Retain the services of a qualified consultant to prepare and submit a report on the assessment of the chlorine disinfection process.
North Glengarry, The Corporation of the Township of	Alexandria Water Treatment Plant	January 19, 2009	• Retain the services of a qualified consultant to prepare and submit an application for a Certificate of Approval for the necessary process changes.
North Glengarry, The Corporation of the Township of	Alexandria Water Treatment Plant	March 10, 2009	• Verify that a qualified consultant prepares and submits a monitoring plan • Once approved, the owner shall implement the monitoring plan • Retain a qualified consultant to complete an assessment of the Alexandria Water Treatment Plant and submit a report.
North Glengarry, The Corporation of the Township of	Glen Robertson Well Supply	October 21, 2008	• Ensure that the production well casing is sealed with a new commercially manufactured vermin-proof well cap by a licensed well technician.
North Shore, The Corporation of the Township of the	Serpent River (The North Shore Township) Water Treatment Plant	January 7, 2009	• Submit a report detailing the results of the pilot study and an action plan to reduce trihalomethanes in the distribution system • Collect samples at least once each month from two different locations at the ends of the distribution system and analyze for trihalomethanes • Retain the services of a qualified consultant to evaluate the primary treatment process.

APPENDIX 2-A-1: Summary of Municipal Residential Drinking Water Systems Receiving Contravention Orders in 2008-09 as a Result of an Inspection

Drinking Water System Owner	Drinking Water System Name	Date Order Issued	Order Synopsis
Schreiber, The Corporation of the Township of	Schreiber Water Treatment Plant	April 21, 2009	• Provide a written plan including the anticipated date of installation of all equipment related to the required upgrades • Operate and apply appropriate measures to enhance and optimize disinfection processes • Finalize the Schreiber Water Treatment Plant upgrades and commission the water treatment plant as needed to ensure compliance with the treatment requirements.
Terrace Bay, The Corporation of the Township of	Terrace Bay Water Treatment Plant	October 22, 2008	• Ensure that sampling and testing for free chlorine residuals is carried out by continuous monitoring equipment in the treatment process at or near a location where the contact time has just been completed • Ensure that water treatment equipment is operated in accordance with ministry requirements • Retain the services of a qualified consultant to prepare and submit a report on the assessment of the effectiveness of the slow sand filters and determine whether an active biological layer is being maintained • Ensure that the operations and maintenance manual is completed as required • Ensure that the continuous monitoring equipment for chlorination and turbidity are checked and calibrated in accordance with the manufacturer's specifications.

APPENDIX 2-A-2: Summary of Municipal Residential Drinking Water Systems Receiving Contravention Orders in 2008-09 as a Result of a Response to an Incident

Drinking Water System Owner	Drinking Water System Name	Date Order Issued	Order Synopsis
Haldimand, The Corporation of the County of	Dunnville Water Treatment Plant	April 22, 2009	• Ensure the chemically assisted filtration system uses the most effective chemical to achieve primary disinfection.

APPENDIX 2-B-1: Summary of Municipal Residential Drinking Water Systems Receiving Preventative Orders in 2008-09 as a Result of an Inspection

Drinking Water System Owner	Drinking Water System Name	Date Order Issued	Order Synopsis
Huron-Kinloss, The Corporation of the Township of	Lucknow Well Supply	December 16, 2008	• Implement the recommendations of the monitoring and alarming equipment study.
Laurentian Hills, The Corporation of the Town of	Chalk River Water Treatment Plant	January 16, 2009	• Retain the services of a qualified consultant to prepare and submit a review of raw flow data, treated water free chlorine, filter effluent turbidity, alarm settings and continuous analyzer settings • Provide the daily distribution chlorine residuals for a three month period.
Prince Edward, The Corporation of the County of	Picton Water Treatment Plant	November 24, 2008	• Retain the services of a qualified engineer to conduct a study to confirm the baffle factor of the clearwells • Report the findings of the study and include detailed information regarding the determination of the baffle factor in the clearwells including contact time information and calculations • Investigate programming the water treatment plant Supervisory Control and Data Acquisition system to calculate, record and trend contact time • Confirm that operations staff have been trained on the contact time concept and the operational controls necessary to achieve adequate contact time.

APPENDIX 2-B-2: Summary of Municipal Residential Drinking Water Systems Receiving Preventative Orders in 2008-09 as a Result of a Response to an Incident

Drinking Water System Owner	Drinking Water System Name	Date Order Issued	Order Synopsis
Black River-Matheson, The Corporation of the Township of	Matheson Well Supply	August 11, 2008	• Ensure the replacement of watermain pipe located at Highway 11/ Highway 101 as per application and drawings • Upon completion of the watermain replacement and repair, ensure a copy of all microbiological sample results are submitted.
Greater Sudbury, City of	Levack (Sudbury) Distribution System	November 6, 2008	• The City of Greater Sudbury must disconnect from the Levack Well Supply, owned and operated by Vale INCO, and establish an alternate supply of potable water for the users of the current Levack Distribution System • Ensure that any permits or approvals required under the Safe Drinking Water Act are obtained prior to the establishment of an alternate supply.
South Stormont, The Corporation of the Township of	Newington Well Supply	October 16, 2008	• Submit a written plan that identifies the actions that will be implemented to address the potential hydrocarbon contamination in the system • Sample the raw water well supply on a monthly basis, for a period of six months for petroleum hydrocarbons and volatile organic compounds • Submit all sample results immediately after receipt.

APPENDIX 2-C-1: Summary of Laboratories Licensed to Perform Drinking Water Testing Receiving Contravention Orders in 2008-09

Municipal Location	Laboratory Name	Date Order Issued	Order Synopsis
Windsor, City of	Caduceon Enterprises Inc.	September 12, 2008	• Cease the initiation of microbiological testing of Ontario drinking water samples at the Caduceon Laboratories Windsor Laboratory pending a review of the Caduceon Environmental Laboratories Windsor licence • Conduct a root cause analysis of sample report to determine how sample bottles that were not received were logged into the Laboratory Information Management System and a final report was prepared and then sent to the client.
London, City of	ETL Chemspec Analytical Ltd.	June 19, 2008	• Conduct a root cause analysis of the late reporting of the microbiological testing exceedance results • Modify procedures to ensure all drinking water samples are readily identifiable as such to the analysts.

APPENDIX 2-C-2: Summary of Laboratories Not Licensed to Perform Drinking Water Testing Receiving Contravention Orders in 2008-09

Municipal Location	Laboratory Name	Date Order Issued	Order Synopsis
Mississauga, City of	Canadian Food Safety Institute	January 13, 2009	• Comply with the formal request for documentation.

APPENDIX 3: Summary of Municipal Residential Drinking Water System Convictions — April 1, 2008 to March 31, 2009

Owner of Drinking Water System	System Name	Synopsis	Sworn Date	Conviction Date	Fine
Waterloo, The Regional Municipality of	Cambridge Well Supply	Failure to comply with terms of a Provincial Officer Order.	July 24, 2007	January 6, 2009	$10,000.00
Timmins, The Corporation of the City of	Timmins (Mattagami) Water Treatment Plant, Timmins (Shaw Township) Well Supply (this system has since been decommissioned)	Failure to collect and test samples from drinking water system.	July 28, 2008	January 29, 2009	$32,000.00
Total					**$42,000.00**

In addition, in 2008-09, one individual was convicted and given suspended sentences for charges related to drinking water offences at a municipal drinking water system. The individual operator was convicted for offences under the Safe Drinking Water Act for failure to properly operate water treatment equipment, failure to keep test records of drinking water system sample test results and failure to properly operate equipment.

Notes

For More Information:

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